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East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 1970

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HUNGARIAN-YUGOSLAV ECONOMIC COOPERATION DESCRIBED

Budapest FIGYELO in Hungarian No 48, 28 Nov 79 p 9

[Article by g.i.: "Rapid Development and Favorable Balance"]

[Text] Yugoslavia's role in the world's trade is about the same as that of Hungary except that the value of imports is higher and exports are somewhat smaller than ours. Another difference should be noted: in the last decade, its foreign trade grew more vigorously than that of Hungary.

The composition of Yugoslavia's foreign trade underwent significant changes in recent years. At the beginning of the 1970's, two-thirds of the imports came from the OECD countries and, within, 44-5 percent from the EEC countries. The export ratios to these two entities were 55-56 and 35-36 percent, respectively. In the years following the world price explosion the participation of these entities in Yugoslavia's trade dropped to 54-57 and 39-40 percent (OECD and EEC exports). The other ratios show that Yugoslavia's exports to the socialist countries grew from 35-36 to 40 percent. The ratio of imports from these countries also grew, from 23-24 to 30 percent. The developing countries' role also increased: imports from them grew from 10 to 15-16 percent and exports to them rose from 10 to 20 percent of Yugoslavia's exports.

Unique Features

Economic cooperation with Yugoslavia has several unique features from our point of view. Yugoslavia is not a member of the CEMA but since 1964, has been an active participant of bi- and multi-lateral cooperations. The collaboration of Yugoslavia and the CEMA countries extends to 21 areas, covering a wide spectrum of its economy. The representatives of Yugoslavia participate in the work of almost every committee and organ of the CEMA. Yugoslavia has about 50 multi-lateral treaties now with the CEMA countries. As a result, Hungary and Yugoslavia use essentially the same methods--long-term contracts, yearly trade treaties and projections, and lasting production cooperations--that characterize the bi-lateral collaboration between CEMA countries. At the same time, trade is calculated and paid for in convertible currency and credit and financing have an active role in Hungarian-Yugoslav cooperation. In accord with trade practice, we sold Hungarian machines and equipment on credit and financed the Adria Pipeline and the development of Yugoslavia's cellulose and fertilizer industry.

Products and Services

Another unique feature of Hungarian-Yugoslav economic cooperation reflects the fact that within it a direct link was established between Hungary and the various republics that comprise the Yugoslav Socialist Federal Republic. Another unique feature is that not only goods but services (in a high ratio, in fact) figure in the traffic. E.g. the 1979 trade and services treaty projects $445 million in goods and $137 million in services. The services (transit, port use, tourism) make up 24 percent of the traffic which is higher than in any other relation.

A feature of the Hungarian-Yugoslav trade--which is similar to our trade with the CEMA countries in general--is the high ratio of shipments flowing out of cooperation and specialization contracts. About 40 percent of the trade is based on long-term cooperation. But the structure of goods of this trade is significantly different from the structure that evolved in our trade with the CEMA countries. In Hungarian-Yugoslavian trade, the determining factors are materials, semi-finished products, and parts. Their ratio is over 50 percent. The high ratio of materials, parts, and semi-finished products is due to several factors. One of them is the fact that the most important cooperation products: paper-wood-cellulose, fertilizers, and steel mill products increase the volume of this group of goods. Another is the fact that the processing industry cooperation and specialization are not end-product oriented. (The Raba cooperates with Yugoslavian companies in the production of trucks and auto-related main units. Cooperation exists in the production of electron tubes and semi-conductors. Work is hired out in cable production. The Ganz Electric Works cooperated with Yugoslavian companies in the production and shipment of 46 three-part electric trains.) Partly because of the factors above, the ratio of machine industry investment goods is relatively low, around 20 percent. Industrial consumer goods take up about 7-8 percent and agricultural products about 4-5 percent of the trade.

Long-Range Undertakings

Hungary and Yugoslavia carried out several very important joint developments and ventures in this decade. Hungary participated with its economic tools in the development of Yugoslav fertilizer production and undertook to ship various chemical raw materials. In return, Yugoslavia will ship 200,000 tons of phosphate fertilizers every year for 15 years. Another highly important long-term collaboration specifies that Hungary participate in the expansion of an existing cellulose factory and ship cellulose birch trees continuously. In return, Yugoslavia will send 40,000 tons of cellulose every year for 20 years. The Adria Oil Pipeline was built with Yugoslav, Hungarian, and Czechoslovak cooperation. It not only transmits imported oil but projects joint buying of the oil. The cost of oil would be offset by jointly-built projects in the oil-exporting countries or shipments of cooperatively-produced goods. An important result of bi-lateral cooperation is the Obrovac Aluminum Factory. The factory has a 300,000 tons/year capacity. Its equipment, worth $40 million, was supplied by Hungary.

In the present plan period the Yugoslav-Hungarian economic cooperation grew unbalanced. Yugoslavia's part in Hungarian imports has been 1.7, 1.8, and 1.6 percent in the last three years while its role in Hungary's exports was 2.7, 4.5, and 4.7 percent. The annually-growing positive Hungarian trade balance is due to several factors. Yugoslavia demands ever more iron and non-ferrous metals and agricultural products. The fulfillment of these demands by Hungary resulted in a positive trade balance. In contrast, Hungary's imports did not reach the projected level. This is partly due to the fact that the pace of internal price increases is not the same in the two countries--the Yugoslav companies' prices are often above those of the world market. This acts as a brake on Hungary's desire to buy from Yugoslavia. Yugoslavia could not overcome the negative balance of product trade through its usually positive balance in services. (Hungary's need for services, often due to its need for sea ports, is much higher than that of Yugoslavia.)

The 1979 Hungarian-Yugoslav trade and services treaty projects a 23 percent increase in simultaneous imports and exports. It appears that this year's traffic will also diverge from the projection: although imports increased by almost 40 percent in January through September, exports fell significantly below last year's level. The long-term treaty counted on $1.5 billion of balanced Hungarian-Yugoslav traffic in 1976-80. In the first three years of the plan period the actual traffic was marked by a great imbalance and exceeded $1 billion and, counting this year's trade, will pass $1.5 billion--more than what was projected for five years. It is certain that the 1976-80 trade will be well above the projection--and may exceed $2 billion--but is not likely that it will be balanced.

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FOREIGN TRADE MINISTER REVIEWS COUNTRY'S EXPORT PERFORMANCE

AU221950 Tirana BASHKIMI in Albanian 19 Dec 79 pp 1-2 AU

[Interview given to our editor by Minister of Foreign Trade Nedin Hoxha: "The Growth of Exports Indicates the Vitality and Stability of Our Socialist Economy"]

[Summary] All the communists and working people in the foreign trade sector mobilized themselves in 1979 to fulfill the plan. They redoubled their efforts to smash the imperialist-revisionist blockade and to overcome the difficulties and obstacles created by the Chinese revisionists. "Particularly good results were obtained in exporting important commodities such as chrome ores, iron-nickel ore, benzin and gasoil, liquid bitumen, blister copper, electricity, urea, agricultural produce and products from the light and food industry such as tomatoes, dried and preserved vegetables, medicinal herbs, handicraft commodities and so forth. New commodities have been added to our exports, such as products from the Lushnje plastic goods plant, cathodic copper, ferro-chrome and so forth."

The growth and development of our exports show once again the correctness of the party's policy and the vitality and stability of our socialist economy. While the capitalist and revisionist countries are gripped by crises, particularly in the field of energy, our country is not only meeting its own needs in oil and electricity, but is also exporting them.

Out exports are constantly increasing and the proportion of manufactured products is also growing. About 65 percent of our exported commodities is accounted for by manufactured or semi-manufactured goods and that percentage is constantly growing with the commissioning of new plants and production lines. Currently, our most important exports are chrome ore, iron-nickel ore, petroleum products, coal, electricity, agricultural produce, products of the light and food industry and so forth. It is possible to increase the quantities of the commodities for export. Another valuable source of increased exports is in agricultural produce, particularly fresh vegetables, as well as medicinal herbs.

"In addition to increasing our exports, we are also working to increasingly better fulfill our economy's needs for imported commodities, strictly adhering to the party's instructions to insure an active balance of trade every year, that is, to sell first and then buy from abroad."

As to the need to constantly increase exports, particular attention must be paid to improving the quality of our products and to their packaging.

CSO: 2100

SHORTCOMINGS IN TRADE NETWORK ATTACKED

Tirana ZERI I POPULLIT in Albanian 10 Nov 79 p 3

[Article by Qirjako Mihali, candidate member of Politburo, deputy chairman of Council of Ministers of People's Socialist Republic of Albania: "Profound Studies, a More Scientific Planning and Organization"]

[Text] The highest objective of our party is the uninterrupted increase of the general material and cultural wellbeing of the people, so that the people will lead a long, happy and content life, while solidifying and strengthening our socialist fatherland in every direction. By implementing this policy in the most complete manner, the trade organs and the workers of trade enterprises have achieved important successes. They are satisfying better and better the needs of the people and of the economy. Our country does not know any phenomena of crises and of disruption of supplies to the people, and there are no price increases for goods and services. Trade, as a component part of the economy, develops on the basis of the demands of the objective economic laws of socialism.

This reality of socialist Albania is the result of the work of the people led by the party, waging a sharp class struggle against the enemies of socialism, by protecting and increasing the victories, and by defeating the fierce imperailist-revisionist blockade.

A characteristic of our trade is the allround growth of sales, several times higher than the population growth. Thus, this jubilee year, in comparison with 1960, our population has grown by 60 percent, and the circulation of food and non-food products for the same period has increased by 2.4-2.6 times. Food products such as fats, milk, eggs, macaroni, sugar, vegetables and industrial products like shoes, sweater, knit-wear, and socks, furniture and household wares and so forth, have increased three to four times. The development of our socialist trade becomes more evident day by day and in every corner of the fatherland. Comrade Enver stressed at the Seventh Party Congress: "Our entire economic, political and social development has always aimed to serve the interest of the people, to assure it a happy, comfortable, free, democratic and independent life." Many material goods reach the consumer through trade. The duty of trade is not only to follow the development of production, but to anticipate it, by studying and knowing on ever more scientific bases the needs of the people and of the economy. The party has never considered trade a simple technical, sales and goods circulation apparatus, but a live organism of the economy which powerfully influences our expanded socialist reproduction. And large production is, of course, accompanied by large circulation of the products. In this direction, the principal tasks of trade are scientific planning, work through contracts, the most effective utilization of the network and its modernization. Without the radical improvement of planning there can be no talk about the strengthening of the ties between production and consumption. The Ministry of Domestic Trade, the trade sections of the executive committees of the district people's councils, must exert greater influence in the deepening of planning at the base, in the trade enterprise, by employing the method of balances for all the requirements of the people, for each product, no matter how small the demand for it. But the balance method is not used extensively and intensively either for the articles for sale or fore trade-related expenses. Many expenses go into trade, especially for its supporting activities. The labor force in the enterprise, for example, is calculated on the basis of the conditions of the preceeding period; the demands for various materials, the equipment of shops, energy requirements and so forth, are not always based on exact studies and balances. The plan of monetary circulation for each place of work in trade is not accompanied, on time, by the supply plan for the necessary articles. The principal means in trade are not fully utilized as a result of such shortcomings. In these directions there must be insistence on the strengthening of planning in the enterprise. The higher the level of planning in the enterprise, the more scientific is the planning for the circulation of goods and the coverage of the buying power of the people and so forth.

Along with a thorough and scientific planning, detailed contracts based on exact deadlines, constitutes a powerful means for the implementation of the plan, for guaranteeing the supplying of the people on time with the planned quantities and assortments. Therefore, the work for the drafting and implementation of contracts must be organized and kept under control, as an important link which guarantees the fulfillment of plan tasks. If this is not done, the trade enterprises cannot carry out a developed supply and service activity. The task of the trade organs is to create conditions for the people to be supplied regularly with all the goods which we produce and have. It is therefore necessary to make studies and to determine the needs of the people according to age, sex, regions, zones, seasons and so forth. Studies are also required for the establishment of the sales network, the number of stores and units for each category of goods, and on the combining of articles which must be sold in every shop, so that the clients can be supplied in one place with as many products as possible which they need. With regard to this question, an important role must be played by the trade section of the executive committee, but the ministry must provide the necessary recommendations for the practical organization of the network, by studying progressive experience, the advances of science and technology in the field of trade for the setting up and organization of the sales network. This cannot be left to spontaheity and to subjectivism, but must conform to scientific discipline, going as far as to make even profound specializations, but always justified on the basis of our possibilities and needs. The aim of the trade organs should be the creation of large units with specialized departments. The main thing is for the network to be able to serve the people on time and for the space of the shops and of the warehouses to be fully utilized.

The utilization of the principal means, especially of the trade network, is a problem which has not been fully solved. This is caused by the lag in the organization of sales units; a good part of the space and area remains empty, at a time when new requests are made for investments for the expansion of the network.

Another measure which facilitates the supplying of the population is also the question of the distribution of goods in the retail network, i.e., the supplying of shops with all the goods in storage or which arrive from the distributor. Accentuated delays exist in the circulation of goods within the sphere of the enterprise. There are also shortcomings in the distribution to shops of the same commodity category. Some are over-supplied, and in other cases there are delays. A better work must be carried out, and these shortcomings must be avoided to fully facilitate the supplying of the people.

An important element in the chain of tasks for a cultivated service and for a correct attitude toward the people is the work schedule of the network. This must be studied for each shop and must be rigorously respected, by assuring the operation of the shop with its entire capacity. This means that the shop must be supplied with the entire nomenclature of goods which it sells, and that the workers must always be on duty. The period which is not utilized within the fixed schedule is a "dead" period which is harmful to the economy. Therefore, organizational measures must be taken which raise the labor productivity of each trade worker, and the shortcomings and delays in inventory work should be avoided.

The chain of the elements which characterize the service of the people by trade also includes the cultivated presentation of the network and of the personnel, starting with the unit, the inventory and the service worker. Work has been carried out in this connection to educate the workers, but nevertheless, there are still weaknesses and shortcomings. There is subjectivism in setting up and equipping the network. The Ministry of Domestic Trade has mismanaged this key problem. As a result, greater progress must be made in the standardization of the equipment of shops and of storagehouses. This should be done in a way so as to avoid unnecessary expenses and material damages through installation and dismantling of shelves and counters, but it must be done through the use of movable elements and simple and comfortable structures.

The trade network plays an important role in the implementation of the task of reducing the differences between the city and village. The trade network gathers farm and dairy products from the cooperative village and from the plots. In this direction work has been done and is being done, but it must be said that there are still some shortcomings. The fact that in the places of the former village markets, cooperativists continue to come to the city to sell the products of the cooperativist plots shows that trade in the village needs improvement. Here too there are many and good examples which must be studied and propagated in a more organized manner.

The raising of the ideological-political level of the workers is the most effective means for the protection of property and the raising of the level of service. They must be more conscientious because they have in their hands great values. The knowledge of laws, of the rules and of the trade technique is a permanent task of the workers. The trade organs and the trade enterprises must solve many tasks in this sector and they will proceed in their work by deeply studying the progressive experience, which, like everywhere else, in trade, too, is a rich one. For the study and expansion of the progressive experience in the sector of trade, a more resolute work must be done in order to place trade more correctly in the role which it merits, so as to serve the people in the best possible manner. Thorough studies and the more scientific planning and organization in all the links of the trade sector are great and permanent tasks for the trade enterprises and organs.

Our workers have been familiarized with and are deeply applying themselves to the study of the very valuable recommendations given by Comrade Enver during his visits to the districts of Shkoder and Llezhe. The workers and the trade organs are understanding better and better the tasks set for raising the standard of living of the masses. They become ever more conscientious, work with determination and bravely overcome the shortcomings by putting into practice the party directives to serve the people in the best possible manner. The rising production, the continuous and ever better supply of the people are the clearest reflection of the wonderful reality of our socialist fatherland, where the people find everything in consumer goods produced with the effort and sweat of our workers in the fierce class struggle against the imperialist-revisionist encirclement and blockade. Only in our country is there a real general growth in the material and cultural level of the working masses; the real income rises, there are no price increases, there are no taxes, education and health serve the people at free cost and so forth. The future will be more prosperous. The people feel this in our present reality, and they are sure that the party thinks and works for the people, that it leads them on the road to socialist construction by faithfully carrying out the teachings of victorious Marxism-Leninism.

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WASTE, POOR PLANNING IN FOOD ENTERPRISES

Tirana BASHKIMI in Albanian 3 Nov 79 p 2

[Article by Petraq Shtrepi: "Global Norms Contrary to Scientific Planning"]

[Text] In the food enterprises of some districts our attention was drawn to this fact: The planning of norms for the consumption of some types of vegetables and fruits for the same ready-to-eat products varies, sometimes considerably. Some data. For the production of dried leek in the food enterprises of the districts of Durres, Berat, Lushnje, Fier and Vlore, are planned respectively 12,360 kg, 18,000 kg, 15,000 kg, 15,200 kg and 14,000 kg fresh leek per 1,000 kg of dried leek. For spinach are planned respectively 20,000 kg, 40,000 kg, 24,000 kg, 22,500 kg and 24,000 kg. These differences also exist in regard to the norms of fruits for jams. In some cases these norms are expressed for groups of raw materials.

How is it possible? This question can rightly be asked by anyone, the more so since we have to do with large quantities of raw materials for processing. Therefore we have to do with large, unused reserves, because there are gaps and shortcomings in the organization of study work, the follow-up and implementation of norms by the enterprises themselves, the executive committee of the district peoples councils, up to the Ministry of the Light and Food Industry.

--The planning of these norms--we were told in the food directorate of the Ministry of Light Industry and the Food Industry,--is done for groups of articles, for example, for dried vegetables as a whole, or for jam, preserves, marmalade and so forth. It is "forgotten" that dried vegetables include leek, onions, paprika, spinach and so forth, which differ from one another. --This happens because we have to do with many articles,--they argue in the food directorate. And the enterprises themselves fix the norms according to their wish. If there were correct detailed and planned norms, the overfulfillments mentioned above would be avoided. This is global planning, for the sake of playing it safe. These norms are contrary to the scientific planning of the economy. They are such because no profound analyses and studies are made regarding them, and they are roughly established. It is a known fact that globalism is harmful and that its consequences weigh on the economy. In this sector, great material values are spent, and instead of spending, as the party teaches, with the pencil in hand, the food directorate acts in a liberal and indifferent manner. This type of global planning is intolerable and harmful.

It is necessary to carry out an organized work for the expansion of progressive experience on the branch level. On the basis of this experience the ministry must take measures for the drafting of single norms for raw materials for equal conditions. This task set by the government aims at starting to apply new and improved norms in 1979. But why is it that this task has not been implemented? "The enterprises have opposed it," they say, or "the qualities of raw materials differ from district to district" (these ideas are contradictory). The truth lies somewhere else. The food directorate has no data on the actual fulfillment of the norms for these raw materials! Neither does the planning directorate of this ministry receive such data. Without these data one cannot control the work in the enterprises, one cannot generalize the example of those who have attained high indices in production, and moreover the unification of material norms is not possible. The food directorate of this ministry claims that the statistical program cannot follow up the fulfillment of norms of the consumption of these raw materials on the records. But who prevents these comrades from knowing with accuracy how much raw material is consumed by this or that enterprise? In this manner generalizations can be made, the progressive experience can be expanded, and moreover even the weakest point will become the object of study on the themes of the technical-scientific revolution. It is not enough only to go to the base, to check some problems, to read some summons, and subsequently leave them unsolved, half done. Each check-up must become a starting point for detailed studies in order to arrive at valuable conclusions. But these indices are underestimated, this task is left incompleted. The same thing can also be said for the norms for the consumption of combustible material, steam, water, and electrical energy, because these enterprises have not yet fully established the measures for the consumption of these materials, which help to control their consumption and to determine as correctly as possible the norms per production unit.

If the norms for the consumption of materials are scientifically studied and well documented, then they will mobilize the working collective and the managers of the enterprises to take technical-organizational measures which help fulfill these norms one by one. On the other hand, unstudied and haphazardly carried out norms have the opposite effect and are demoralizing. For example, in the food enterprise in Berat, by having a high and unscientific norm for onion [processing] (18,000 kg fresh per 1,000 kg dried), its managers and specialists are not very much interested in the quality of the raw material which they process. Because, as they themselves say, the consumption norm is directly related to the quality of the raw material. By having well-studied and scientific norms they will struggle even more, together with the agricultural workers, for the selection of suitable seed and soil for planting in time and for executing cultivation of the crop, for the timely harvesting of production, and so forth, they will make continuous efforts for the training of workers so that they will better operate the machines, and to improve the technology of production.

Also socialist competition among enterprises is not properly organized, with such varying norms, so that it will be effective and to play its mobilizing role. It is clear that the food enterprise of Lushnje or of Fier which plan 15,000 kg of fresh paprika for 1,000 kg of dried paprika cannot enter the race with that of Berat which plans 19,000 kg of fresh paprika and so forth. The incorrect planning of these norms also results in, among other things, the misuse of agricultural land. For the same ready-to-use product, let us say for dried onion, a larger area will be planted in Berat than in Durres.

Therefore, they should not remain stolid in the food directorate of the Ministry of Light and Food Industry. They should take the situation well in hand so as to carry out all the tasks with which they have been charged.

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CSO: 2100

PROBLEMS IN METALLURGY, ENGINEERING REVIEWED

Prague HOSPODARSKE NOVINY in Czech 23 Nov 79 p 2

[Commentary by CPCZ Department Deputy Director, Jiri Posit: "Metallurgy and Engineering"]

[Text] In the enterprises and plants of the metallurgy-machinery complex, as in our entire national economy, attention during the last months of the year has been focused on the fulfillment of the plan in the realm of usage.

In the works managed by the Federal Ministry of Metallurgy and Heavy Engineering, the overall production plan during January-October--following the equalization of the January shortfall, has been exceeded by 126 million korunas. The production dynamics during the same period reached 83.2 percent which meets the plan. Certain economic production units (VHJ) have difficulty in fulfilling planned tasks as, for example, the high-tension electrical works in Prague and Chepos in Brno. The VHJ Ferrous Metallurgy and its enterprises have by the end of the third quarter registered a shortfall in coke production of 143 thousand tons, in iron production 257 thousand tons, in steel production 316 thousand tons, in blocked products (blokovny) 140 thousand tons, in rolled materials 91 thousand tons, and in pipes 3 thousand tons. Consequently, the VHJ management is concentrating on improving coke equipment, especially blast furnaces, primarily in Trinec. Principal attention is focused on the repairs of blast furnace no 2 in the East Slovak Iron Works where Czech and Slovak construction organizations are also assisting very effectively.

Deliveries for the market were lowered by 400 housing units of the Okal type which are primarily intended for the North Bohemian brown coal district.

Special attention is devoted to meeting the tasks in export. Shortcomings in export to the capitalist countries have accumulated in Skoda Pilsen, CKD Prague, ZSE Prague and Chepos Brno. Thus far, the plan of prescribed differential indicators has not been implemented in Skoda, which unfavorably influences task fulfillment. Not even Skodaexport commitments have yet been met.

Deliveries for investment construction are being met. Principal care is focused on deliveries for contractual projects where fulfillment of 98.5 percent is expected. However, in a number of these, such as those intended for the North Bohemian brown coal district, insufficient attention is still devoted to their quality and timeliness.

In its own investment activity, the ministry expects a shortfall of 150 million korunas. The problems center in the Ferrous Metallurgy VHJ in Prague, causing jeopardy to the production of the Sverma Iron Works in Podbrezova, and to the installation of an electric furnace in Poldi SONP in Kladno.

Insufficient construction preparedness in the VTZ Chomutov has caused delays in the installation of imported technological equipment. Also effected is the third phase of the NHKG Kuncice railway in the amount of 180 million korunas.

Construction of the iron works in Prerov and ensuing heavy mechanical and installation traffic are threatened by a loss of 40 million korunas because deliveries from Skoda Pilsen, CKD Blansko, and the Kralovopole Machinery Works, will not be met until the first half of 1980. We must continue to pay special attention to nuclear energy facilities not only in Skoda Pilsen but also in Sigma Olomouc.

In the enterprises managed by the Federal Ministry of General Engineering there was at the beginning of the year a shortfall of 2 billion 600 million korunas, of which 90 million korunas remains to be covered. By the end of September, out of 98 items included in the plan of binding tasks, 27 items of implementation procedures were not fulfilled by the enterprises. This means that in the fourth quarter we would have to meet 30 percent of the implementation procedures, which is practically impossible. This includes, for example, the production by the Heavy Machinery Works of tractors Z-16045 with front-wheel drive and circular loader UNK-320, the production in Elitex of the hydraulic jet loom H 1000, etc. The most serious situation in this respect is in the Automation and Computer Technology Works, and in Chirana.

In the market sphere of selected and controlled goods, by the end of September, the General Machinery Works failed to deliver the aliquot share of 8 and 16 mm film projectors. Strojsmalt is meeting inadequately deliveries of refrigerators, washing machines, heating equipment, bathtubs and water containers. Out of 29 innovation projects, by the end of August, production of 16 items has not even begun. The Machinery Technology Works also failed to give proper attention to innovation projects. Of 6 planned activities, not a single one has been started by the end of August. Tesla Prague is trailing behind in the third quarter in the deliveries of portable and color television sets--this even though planned requirements had been lowered, radio sets, recorders, and batteries. Here again, production of only 5 out of 14 designated items was started by the end of August.

Prago-Union is late in delivery of bicycles, electric irons, sewing machine needles, skates, and suction tubes for vacuum cleaners. Out of 28 innovation projects, 12 had not even been started by the end of August. In Zbrojovka, there are problems with deliveries of rust-proof and aluminum cooking ware, and in ZVL Povazska Bystrica, the production of a new vacuum cleaner of the A-1 type has not been initiated.

This state of affairs has a negative effect on the overall volume of deliveries for the domestic market, including its broader implications.

Of the planned areas which are not directly part of the consumer goods sector, by the end of August, there were problems with meeting tasks in the Roller Bearing Works, in calculator production in ZAVT, and spare parts for automobiles in the Czechoslovak Automobile Works. Similarly, the Heavy Machinery Works in Martin are not meeting delivery tasks in spare parts for electric and diesel locomotives. In the sector structure, there is a shoetfall in fulfillment, as of the end of August, of more than 2 billion korunas in concrete production, even though the debt of defaulting enterprises, of which there were 34 by the end of September, is only 430 million korunas. This means that even those enterprises which fulfilled their overall commitments for the third quarter, owe in the overall planned structure a debt of more than 1.5 billion korunas, with all its negative influences on the final consumer, as well as on fulfillment of production needs within the VHJs, within the Federal Ministry of General Engineering, and even for deliveries to other sectors. For this reason, it is necessary to exert maximum effort during the remainder of the year to at least partially alleviate this state of affairs.

In the deliveries of machinery and investment project equipment, modest underfulfillment is expected in only two VHJs.

The ministry expects to meet its commitments to the socialist countries. On the other hand, export prospects to capitalist countries are not good due to low fulfillment of annual tasks, first of all, in VHJ Elitex (36.4 percent), Zbrojovka (59.5 percent), and Chirana (63.1 percent), ZTS Martin (66.6 percent), Tesla and TST (65 percent).

The substantive difficulties are found largely in the enterprises. Higher attention is demanded in the qualitative aspects of the reproduction process. Above all, we must monitor expenditures for wages and salaries. Raising effectiveness requires even better application of the basic khozraschet principles, which means that each and every enterprise must constantly compare its financial outlays with the results of its economic activity. It is still a lawful necessity to manage our resources according to budget requirements, both in outlays andincome and always balance these against the rentability of individual economic activities. And here too, we must apply the right of control by party organs and bodies.

9496
CSO: 2400

POSITIVE RESULTS FROM USE OF NC MACHINE TOOLS CLAIMED

Prague HOSPODARSKE NOVINY in Czech 12 Nov 79 pp 8, 9

[Article by Zdenek Kozar, Candidate for Doctor of Science, director of the Engineering Technology and Economy Research Institute, Prague]

[Text] The 15th CPCZ Congress and the following sessions of the CPCZ Central Committee have emphasized the need to utilize the results of research efforts to a much greater extent in production practice. From the very beginning, the full cooperation of research institute, inventor and user has been a condition for the success of such an extensive task as federal project P 15-124-023, "Integrated Production Systems [IVU] in the Machine Tool Industry."

Do We Need IVU?

An imbalance between the level of large-lot and mass production and small-lot and piece production was characteristic of machine tool output in the sixties. Integrated automation, in the form of transfer lines and single purpose machines, began to be successfully applied in large-lot and mass production. For small-lot and piece production, the operative resolution remained at the level of small-scale, and sometimes large-scale, mechanization. Partial automation, by means of digital technology, began to be gradually introduced at the end of the sixties. However, this is such a high level of innovation that the overall conditions of mechanized production did not permit its full utilization.

A need arose for the integrated design of whole, automated production units.

Given this situation, the Prague Engineering Technology and Economy Research Institute (VUSTE), in cooperation with leading Czechoslovak experts, proposed a research program directed at the integrated automation of small-lot machine tool production through utilization of digital control machines. It presumed that in the first stage automated production systems would be created at approximately the workshop level, utilizing NC [numerically controlled] machines from the existing production programs. This would not be sufficient however. At the same time, the system would have to integrate problems of the organization and management of the production process, of transport and material handling, of technical preparation and servicing of output, of inspection and measurement, of the quality of materials and semimanufactured products, of the tasks of the human factors, all problems heretofore considered in isolation. On the basis of an approved conception and a knowledge of the needs of the Czechoslovak machine tool industry, the institute prepared material containing the studies and designs of designers and producers which it presented in 1969 to the federal initial review agency.

The review agency recommended acceptance of the VUSTE proposal and suggested the inclusion in the federal plan, beginning in 1970, of a complex project. It was directed not only at the customarily designed technology of machining, but also at shaping, surface finishing, casting production, heat treatments and the production of electronic components. Nor was verification neglected of the potential for the management of the production and technical processes by a control computer. The goal of this federal project was the development and the testing of the conception and the potential for the integrated automation of small-lot machine tool production.

To achieve this goal it was necessary to expand research and development in a new direction and, through the choice of the optimal variant from the existing studies, to prepare its implementation from the viewpoint of the component basis and the applied technology of completely different integrated production lines. The project was intended to enable the Czechoslovak machine tool industry to compete with the most advanced in Europe in the area of the application of NC production and computation technology and to integrally design the production of components from the technical aspects of their construction through to their complete and economical manufacture.

The situation in the CSSR at the end of the sixties was more complicated than in other industrially developed countries. At that time there were only a few NC manufacturing machines in operation in our factories, and these were inferior to those abroad. It had not been decided whether and in what way we would share in the further development of NC technology. This was the situation in which federal project P 15-124-023 arose, which recognized in time the rise and importance of NC technology and grasped in advance the potential for the integrated automation of small-lot machine tool output. This developed conception surpassed foreign efforts, as the UN Economic Commission for Europe seminars in Prague in 1973 and 1976 confirmed. During the Fifth Five-Year Plan we succeeded in developing, producing and testing new NC machines capable of incorporation not only in integrated production lines, but also in combination with conventional machines.

Can We Apply IVU

VUSTE, as the conceiver, chief designer and coordinator of the project, has placed extraordinary emphasis from the start on the need, in the very breakdown of the state plan, for assuring clarity in the assigning and mutual carrying out of single tasks. In the course of design, then, there was no need to correct the material content of the tasks and the deadlines for their completion. Several implementation goals constituted exceptions, where a subsequently increased design standard required an extension of the completion deadline (for instance in the application of computation systems).

The level of IVU automation in various technologies is qualitatively different according to the level of automation already achieved. The highest automation level has been achieved in machining, since the area of NC machining tools has at this time achieved the most progress. The level of shaping can be evaluated as medium. The remaining technologies were at the beginning of automation and provide for the time being very restricted possibilities.

These new realizations and the attempt to implement them provided strong motivation, which overcame even seemingly insurmountable difficulties. Since, at the time of the design of the project, appropriate NC machines were not available, their development was assured (for instance FQH 50 machining centers in the Gottwaldov Precision Machine Plant national enterprise and the SPT series NC lathes in the Sezimovo Usti Kovosvit national enterprise). These machines supplemented the production program of the producers and today are a sought after and attractive export product. It was possible to assure, with great difficulty, the application of computation technology and automated transport and handling systems. The IVU producers themselves deserve much credit for the completion of this apparatus.

IVUs for machining, in their entirety, cover the production of all square components up to the dimensions of 1,250 x 1,250 x 1,250 millimeters and rotary components to a diameter of 320 millimeters and a length of 600 millimeters.

VUSTE designed, and the Povazska Machine Works national enterprise produced, for the production of small, nonrotating components, the IVU 200, which is laid out according to the modular concept of automated transport and incorporates the OCH-1 and OCV-1 NC machining centers (they are in the production program of the Povazska Machine Works) with an IMS 1 measuring unit and an ultrasound washer (developed by the Nove Mesto nad Vahom Research Institute of Mechanization and Automation).

For the production of small, nonrotating components, the Gottwaldov Precision Machine Plant designed and produced the IVU 400, with which the technical public could get acquainted at the end of 1973. In addition to seven FHQ 50 machining centers, the digitally directed transport system is a contribution (in the development of which the Nove Zamky VUNAR shared), which possesses extensive applicative possibilities, due to its universal conception, in conventional production as well.

The most expensive IVU, designed for medium nonrotating components, is in the Kurim Machine Tool Factories national enterprise. It originated from the combination of two originally independent IVUs, the IVU 800 and the IV 1250. It is composed predominately of NC machines, of which four MCV 800 machining centers of modular construction with automatic component exchange and 80 tools originated within the project framework. The original is a transport system uniting a single technological workplace in four branches. The IVU is controlled by a Tesla RPP 16 digital system.

The development and production of the IVU 320 for the production of rotating components was the object of a design of Kovosvit national enterprise. It is little known that at the time of its appearance it belonged among the largest systems of its type in Europe and probably in the world. It is made up of 25 NC machines, 22 of which are SPT series lathes, developed at the producer's factory in the course of project implementation. All lathes are digitally controlled according to the DNC [digital numerical controlled] method by the Soviet M 6000 computer, which at the same time controls the production process as well. The Transport national enterprise produces an atypical transport and handling system; the project implementor assured its automatic controls, however, only with great difficulty.

A project, carried out at the department of machining and shaping tools of the Brno Technical Institute was concerned with the problem of the simulation of the control of an IVU by computer. The goal was to verify the technological process in advance and where necessary to make corrections in the design of respective production systems according to the results. Due to a delay in the delivery of the Tesla RPP 16 computer, a Robotron KRS 4200 computer from the GDR was used. The project results and apparatus are being widely employed both for the pedagogical goals of the engineering faculty as well as for the design needs of federal project P-15-124-060 (PVS) [Variable Production System] and for consultation work at machine tool factories.

In the area of IVUs for shaping, four integrated production lines have been implemented for the shaping of components from cold steel plate. The most successful may be considered to be the IVU in the ROMO national enterprise where NC shaping machines, rapidly developed for the needs of IVUs within the framework of the General Directorate of Plants for Engineering Machinery, predominate. The contributions of IVUs have stimulated the federal project "Integrated Shaping Operation," the components of which will also be IVUs. The remaining three IVUs for shaping include conventional shaping machines which are connected by automated, and centrally controlled interoperational transport systems. An IVU in the Nove Zamky Elektrosvit national enterprise has replaced an English import and even has better technical parameters due to the use of a different technological principle. The operation of an IVU in the Dolne Hamre Sandrik national enterprise helped to meet increased production tasks in the area of steel plate components in the shape of a concave, spacious surface. An IVU in AVIA national enterprise fulfills tasks of automobile production. In the Lanskroun Tesla national enterprise an IVU, controlled by a Tesla RPP 16 computer, was designed and produced for the production of precise and reliable electrical resistors. At the present time there are preparations to introduce five more IVUs of this type, which make possible a substantial increase in the volume and quality of output.

Will IVUs Be Worthwhile?

The technical and economic parameters requested in the federal plan have been met and in a number of cases even exceeded. Figure 1 shows this.

Figure 1. Extent of economic effects of IVUs (minimum and maximum values) during their use in three shift operation, as determined within the framework of federal project P 15-124-023, in comparison with average conventional production. (100%)

Effect on:	Minimum	Maximum
Productivity	192%	457%
Need for Production Space	-30%	-58.3%
Average Production Time	-20%	-62%
Workers for Basic Production	-47%	-73%
Observation by Supervisors	-18%	-42%

An additional significant success is the achievement of two-shift operation; there are also cases of three-shift operation. For instance, in an IVU 400 in 1978 five FQH 50 machining centers reached an average shift use of 2.63 which reflects utilization at an average of 87.9 percent of capacity. From the point of view of conserving workers, the practical application of a single operator for two NC machines in an IVU is significant.

The advantage of our approach over that of foreign countries lies above all in the integral character of the design of production, management and social areas, which also permits us to use the IVU principle in production units with conventional machines as well as in automated production facilities.

In summary it is possible to say that Czechoslovak integrated production lines for machining have conceptually surpassed and in implementation are comparable with foreign production systems composed of NC machines. The first integrated production lines initiated their activity not quite 4 years after the establishment of the federal project. Even in the course of its resolution, several additional enterprises utilized the results of this state project and built integrated production lines on their own initiative, apart from the federal project.

In this project, VUSTE created the conception and the intellectual basis for the further integrated automation of small-lot machine tool output, which makes possible the construction of production systems from NC machines (occasionally even of conventional machines), from introduction by groups to fully automated production systems. Integrated production lines are capable of additional systematic construction in steps leading to full automation and to connection with other units of this type to form production units of higher orders.

On the basis of the concept of integrated production lines, it has been possible to prepare a further stage of the development of computer-controlled production systems made up of NC machines. In the area of machining, this is federal project P 15-124-060, "Flexible Production Systems for Machining." Project P 15-124-242, "The Exemplary Integrated Production, Control and Social System of a Machine Tool Enterprise" at the Hostivar Machine Tool Factory national enterprise is also related to the IVU project. Here on the one hand, more integrated production lines, analogous to those constructed during project P 15-124-023, are being used, and, on the other hand, the principle of integrated production lines is being used as well in other production and storage units so that all the major output, including several auxiliary and service activities, will be established as an integrated production unit on the same logical basis as the control of the production process.

In the area of shaping, state projects are being designed in the ROMO Tesla national enterprises. Factories for Mill Equipment and Kolin projects which are a logical extension of IVUs for shaping and in their conception and level of automation are reaching the level of IVUs for machining. Similarly, in the Podpolianska Machine Works national enterprise, a flexible production system for the manufacture of welds is being developed.

In addition to the state plan, more than 20 integrated production lines have been built or are being completed. For the remainder of the Sixth Five-Year Plan and for the next five-year plan, numerous production units of the integrated production line type are being planned.

The wider application of automated production units of the IVU type in engineering enterprises requires that these enterprises also have a certain number of workers expertly trained for these tasks. For this reason it is necessary to positively evaluate the expansion and specialization of training by our professional schools in the respective areas. The VUSTE Engineering Institute is also involved in this educational system for new experts.

Overall Evaluation

A basic conception has been created of the integrated automation of small-lot machine tool output at the level of fundamental production systems composed of NC machines. By the complexity and orientation toward automation of production systems with a relatively broad component spectrum, applicable to various concrete conditions of the user, we have surpassed similar developments abroad. This is also a starting point for a further increase in the level of automation.

This long-term concept has been successfully verified in practice at the level of basic production units. From 1973 to 1977, integrated production lines for various technologies were implemented successfully in selected Czechoslovak machine tool enterprises. The highest level of automation was reached in machining. A further group was represented by integrated production lines for shaping, and a single IVU has been built for the manufacture of electrical resistors. These production systems have enabled the verification, under production conditions, of technological, organizational and economic questions connected to the efficient use of this investment-intensive manufacturing technology.

Additional machine tool enterprises have utilized the results of the P 15-124-242 project and its operational verifications. They have built, prepared or are preparing integrated production systems of the integrated-production-line type. There are plans to use IVUs in additional machine tool enterprises during future five-year plans.

Although NC machinery made the development of the IVU necessary, it has turned out that the fundamental organizational principles of the material aspect of the production process and its control are applicable within a wider framework.

Even though the intention was to use existing machines and apparatus in IVUs, the development of several new NC machines has been stimulated (for instance the FHQ 50, SPT, OCH-1, OCV-1), which have found application not only on IVUs, but also to a far greater extent.

The requirement that automation be increased beyond its originally planned extent did not contribute proportionally to an increase in the economic efficiency of IVUs, but raised the problem of the application of controlling computers and their terminals for the management of the technological and production process in the machine tool industry. It was possible to define the elements of the management of technical resources.

The automation of management systems of the production process outgrew, in the course of time, the frame of the original need and became the basis for the automation of the management of the production process in basic and higher production units without regard to the level of production technology employed. Here as well a consistent building-block principle has been employed.

Through publication of results (and by means of expert films), graphic information is reaching the wider public concerning technical progress in the area of NC production technology, the most advantageous forms of its application and about the development of production systems composed of NC machines.

The IVU project has initiated more extensive research into social problems, from the choice and education of people to the creation of favorable conditions for their activity. The systematic preparation of young experts has been started, in the form of study at the respective college faculties and in the direction of economics, during postgraduate and post high school study and during single subject training programs.

IVUs have opened up the space for the systematic development of the level of automation of small-lot machine tool production for the next 15 to 20 years.

The economic contributions of the operationally verified IVUs, after an analysis, during further repetitions, of freed up reserves, have also been shown to be highly efficient given the precondition that IVU construction and operation respect acquired knowledge concerning necessary conditions.

The design and implementation of the project have shown that sufficient conditions have not yet been created for projection and that contractors are not prepared to assure the dissemination of results, in the form of contracts, into the machine tool industry. This relates particularly to design, transporting and handling apparatus and computation technology, including programming resources.

9276
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PARTY OFFICIAL DISCUSSES ANIMAL PRODUCTION PROBLEMS

Bratislava PRAVDA in Slovak 9 Nov 79 p 1

[Article by Rudolf Vanco, department head, CPSL Central Committee: "Active Even in Wintertime"]

[Text] Even though Indian summer was unusually protracted this year and long endowed the autumnal fields with warm sunshine, with arrival of nocturnal frosts and November as well as the rapid lowering of daytime temperatures no one doubts that winter is inexorably approaching. This fact is an uncompromising summons for farm workers to quickly complete the harvesting of fall produce and the sowing of winter crops--I have in mind the completion of supplementary sowing for the growth of bread grains damaged by the drought--and the plowmen must also hurry up with their deep plowing in order to manage to plow up the fields under the spring wheat down to the last plowturn before winter with its heavy freezes and masses of snow closes the gates to the village outskirts.

The situation, however, is different in animal production where practically the same responsibilities await farmers whether it is summer or winter, because the consumer wants enough meat, milk, fresh-killed poultry and eggs on the market every day in the widest possible assortment and of course, also of prime quality. Meeting these requirements calls not only for much skill and hard work but also proper management of this production process, systematic mobilization of worker initiative and the proper coordination of socialist competition. In a word, we must intensify politico-organizational work with the aim of successfully fulfilling the obligations which devolve on food producers in this year's plan and at the same time also make good preparations for the required fulfillment of tasks in the coming year.

I know that these are now new requirements. The tasks mentioned press on the day's program every year at this time although we have to deal with them under ever-changing conditions. Therefore it is requested that in every agricultural enterprise and in the management sphere responsible workers seriously think about and thoroughly reappraise what the national economic plan requires of them and what provisos they have made to meet them. Here I have in mind not only the material assurance of desirable production but also the preparation of people and the means of achieving the best possible results through material and moral incentives.

First of all, there is no doubt that we must exert maximum effort to fulfill this year's planned tasks. It is no secret that during the past months agricultural workers were not able to fully meet the plan for state procurement of market animals and in certain okreses not even milk. Consequently, management bodies have prescribed operational quotas for the producers of these products and detailed working schedules of performance. We need not repeatedly emphasize that it is essential to adhere strictly to these work schedules calling for state purchases, especially market animals so that their movement to the slaughterhouse not converge during the last weeks of the year because the processing industry would simply not be able to handle such supplies. In addition, uniform supplies of market animals at the slaughterhouses make it possible for workers of the meat industry to properly process the raw material in the desirable selection and thereby create favorable conditions for the satisfactory supplying of the market with meat and meat products which will unquestionably be in greater demand by consumers during the time of the winter holidays and the traditional welcoming of the new year. Furthermore, we are also eminently interested in having the state plan for procurement of animal products successfully carried out right from the beginning of next year, as the last year of the Sixth Five-Year Plan. In other words, food producers will thereby have their last chance to successfully meet the tasks laid down for them by the 15th CPCZ Congress.

This year's arrears in meeting the state plan for procurement of animal products came about chiefly from the fact that, unlike the higher number of farm animals compared with the preceding year, agricultural enterprises did not have the required weight categories of animals because they had not attained the planned increases and in the production of beef cattle not even the slaughtered weight of market animals. The main reason for this was inadequate supplies of quality feed which had a negative impact on the production of animal products, especially in the first months of this year.

So far the situation appears to be more favorable for the approaching winter as compared with last year. Farm workers in most cases took advantage of opportunities offered in the summer to improve their supplies of bulk feed and in several cases to sow mixed fodder and other intermediate summer crops and even extended by several weeks this year's season of green forage. Naturally, the benefits of these supplies of feed will be determined primarily by their quality. But we can fairly assume that it will be better than in recent years because agricultural workers have considerably more facilities for preserving the feed, especially for ensilage.

The situation is different, however, in supplies of grain feed. The yield was smaller than specified by the plan. Consequently, we had to buy relatively large amounts of grain from abroad. At the same time, provisions are being made to import the required components for the planned production of feed mixes in order to provide the highest nutritional value of these feeds. This created the conditions for efficient utilization of grains to attain optimal benefits from all categories of farm animals, especially for fattening purposes and to raise milk cows. To be sure, this does not mean that we will be able to provide farmers so much feed mix that they can be complacent about it. On the contrary, every agricultural enterprise must, right at the start of winter, use every kilo of grain carefully and most responsibly and make the most efficient use of it. This principle and especially supervision of its adherence is doubly applicable particularly to those enterprises which so far have been achieving lower returns with greater consumption of grain per kilo of meat or liter of milk produced than in enterprises which are operating under approximately the same conditions.

Proper utilization of feed supplies is unquestionably the basic condition for obtaining planned returns from animals and uniform production of animal products. Similar attention must also be given to the observation of other zootechnical, veterinary and breeding principles in individual breeds of farm animals because only by thier comprehensive utilization can we achieve the results we want.

This fact must be borne in mind not only by supervisors of agricultural enterprises and in the management sphere of agriculture but it must also be the center of attention of party officials and basic party organizations. They should direct their mass political and organizational work toward the solution of these problems. Communists in the administration of enterprises, the ROH [Revolutionary Trade Union Movement] and the Union of Cooperative Farm Workers must be asked to mobilize workers' initiative, organize the making of socialist pledges and direct the development of socialist competition to meet planned quotas in animal production with efficient use of grain and bulk feed and raise the quality and systematically improve the efficiency of the production of animal products. Greater attention and concrete assistance must be given particularly to backward enterprises in order to have a minimum of such economic results as those described recently in the pages of PRAVDA in a report from JRD [Unified Agricultural Cooperative] Novy Zivot in Kopcany where, despite a relatively good feed supply, they are getting underaverage returns in milk cow production--an average of about 2,900 liters of milk per cow--and will owe the state almost 60,000 liters of milk. Moreover, they are lagging far behind averages in Senice Okres and in West Slovak Kraj. It is necessary to take a resolute and uncompromising stand at committee and member meetings of CPSL basic organizations to see that every worksite of animal production implements the latest scientific findings and modern practices. Members of basic party organizations must be charged with the specific task of disseminating these progressive elements of animal-production management and their adherence should be consistently checked. After all, we have been convinced more than once that personal examples of communists are among the most effective means of motivating the successful performance of even the most challenging tasks.

Even though agricultural workers will be primarily concentrating on performing tasks connected with animal production in the coming winter period, much work also awaits them in other production sectors. Workers in plant production together with mechanics must make thorough preparations for spring work and economists will be preparing balance sheets for the year and making plans for the coming year. Furthermore, they must get thoroughly ready for the change in economic instruments which will become effective 1 January 1980. Their correct understanding and application have great political and national economic significance.

The wintertime should also be properly utilized to improve the qualifications of workers whether by party training or in the Cooperative School for Workers or the School of Progressive Practices.

In brief, even when nature is taking its winter nap life in socialist agriculture does not come to a halt. People will be creatively engaged in efforts to fulfill the program for achieving gradual self-sufficiency in food production--to carry out the resolutions of the 15th CPCZ Congress.

8491
CSO: 2400

BILLION CROWNS WORTH OF ORGANIC FERTILIZER WASTED ANNUALLY

Bratislava PRAVDA in Slovak 9 Nov 79 p 2

[Commentary by Jozef Sedlak: "Organic Fertilizer Belongs in the Ground"]

[Text] A basic condition for the continuing intensification of plant production is a systematic increase in soil fertility. This is a complex of deposits in the soil which can be effected in a planned systematic manner according to scientifically proven systems with the aim of achieving stability of the agricultural structure. I imagine no one need be persuaded, particularly since enough farm workers have high school and secondary school educations, that the basic means of fertilizing our soil resources is primarily stable manure, dung-water, liquid manure and other organic fertilizers. Science and experience have confirmed that whoever really wants to operate farmland properly must apply organic fertilizer to at least one-fourth of his arable land annually.

Farm workers in Slovakia this year have enough stable manure and other organic fertilizers for almost 340,000 hectares. Compared with the average of the last 3 years the area of arable land enriched by organic fertilizers is thus increased by over 53,000 ha. At the end of the second 10 days of October only 100,000 ha of the entire area remained to be plowed with stable manure.

In spite of these positive factors we cannot be satisfied with the utilization of organic fertilizer. In practice we are constantly meeting with actually schoolboyish mistakes, whether in the storage or the application of stable manure. Specialists in JRDs [Unified Agricultural Cooperatives] and on state farms know, however, that losses as a result of the improper storage, treatment and use of stable manure in the CSSR are estimated to amount to 1 billion koruny annually. In the SSR, the annual production of stable manure is approximately 10,159,752 tons which, at the rate of 4-ton applications, could fertilize 2,539,938 ha of farmland. This amount of fertilizer contained 40,639 tons of nitrogen of which, however, according to expert estimates, almost 40 percent--which represents 16,255 tons of nitrogen--is lost without benefit. If, through greater care, we reduced this loss by only one-half we would obtain an amount that is equivalent, for example, to 27,000 tons liquid nitrogen fertilizer DAM-390. At a wholesale rate of Kcs 1,550 for 1 ton of DAM-390 this would come to Kcs 41.85 million which could be saved annually just for nitrogen by more careful management of stable manure without any other investment costs. Is it not too costly a joke, then, to replace the nitrogen contained in stable manure with synthetic nitrogen fertilizer when the main raw material for its production--natural gas--has to be imported?

Who actually bears the responsibility for these losses? The agronomist, zootechnician or the machine operator? After all, each of these, more or less, is involved in the production, storage, treatment and finally application of stable manure. How is it that in many agricultural enterprises, in spite of the irreplaceability of organic fertilizer for enriching the soil they have not yet prepared detailed work schedules for the production and application of these substrata on individual fields in the course of the year and throughout the whole five-year plan? Why in most enterprises are not specific workers and gangs responsible for managing the organic fertilizers?

The results of a survey conducted last year by workers of the Institute for Scientific Systems of Farming in Bratislava show that approximately one-fifth of stable manure is deposited on farms and almost four-fifths on fields for the most part freely, without any kind of preparation or construction of a solid support. When we realize that in a centrally covered, completely mechanized manure facility there are losses of 30 percent and that in unarranged manure piles, without any support, drainage channels or cesspools to catch the liquid manure, the losses reach 70 percent, we come to the conclusion that in the future we will not be able to manage without building completely mechanized adequate manure facilities with sufficient capacity.

So it is not by chance that even the 13th session of the CPCZ Central Committee took up the problem of organic fertilizers. It was emphasized that we are not so rich as to be able to be so careless in managing this irreplaceable domestic source of nutrients and not properly taking advantage of their positive effects on the fertility of the soil. How are agricultural workers putting these requirements into practice? They are doing very well, for example, in the JRDs of Dubnik, Kolta, Gbelce, Dolna Krupa and Dechtice where for years now they have been managing manure in an exemplary fashion and have already completed the plowing in of stable manure. On the other hand, little attention is being given the management of manure piles or the plowing in of organic fertilizers by the cooperative workers in Bardonov, Bojnicky and many other enterprises.

But it is not only the farm workers who are responsible for the rapid and proper storing and application of stable manure. A large share also devolves on the engineers who still are unable to satisfy the needs of agriculture, for example, with respect to loaders, without which the manipulation of organic fertilizer is unthinkable under conditions of large-scale production.

Workers in the Ministry of Agriculture and Food have on file almost a thousand requests for these machines and meanwhile they have received only 86 loaders. After long negotiations they succeeded in raising the allotment for farmers by another 70 loaders. How many years, though, will the cooperatives and state farms still have to wait before the engineers satisfy their requirements at the present rate?

But the unfavorable situation in supplying mechanization does not authorize anyone working on this problem to sit and wait, in a manner of speaking, with folded hands until there is an improvement in technological supplies. We must take the initiative in seeking solutions at home in agricultural enterprises even at the cost of higher expenditures. Experience clearly shows that careful use of organic fertilizer is one of the most efficient intensification factors because thorough nourishment and systematic increase of soil fertility are the basic foundations for high yields, high returns from farm animals and thus also the determining conditions for overall agricultural results in agricultural enterprises.

8491
CSO: 2400

GERMAN DEMOCRATIC REPUBLIC

ENERGY CONSERVATION SEEN VITAL TO ECONOMIC STABILITY

East Berlin NEUER WEG in German Vol 34 No 22, 1979, signed to press 8 Nov 79 pp 881-886

[Article by Horst Wambutt, director, Raw Materials Industry Department, SED Central Committee: "Use the Energy Potential Efficiently and Economically"]

[Text] The ninth party congress decisions have defined how our growing energy requirements are to be met. In the Central Committee report to the party congress, SED Central Committee General Secretary Conrade Erich Honecker said this about it: "For one thing, we must tap new energy reserves of our own by improving the efficiency of our already much greater coal and energy potential and by creating new capacities. And then, energy sources at a larger scope, on the scale of our entire economy, have to be tapped through an efficient and effective use of energy." (Dietz publishing house, Berlin, 1976, p 50)

Systematic Coal and Energy Production

In analyzing the lessons of the past winter, the 10th Central Committee session has once again focused on the fact that the systematic prouction of coal and energy is crucially prerequisite to stable and dynamic economic development. It directed the greatest attention to using energy efficiently and economically in all areas and making more of a use of norms for thrifty energy use and consumption. "The criterion for it can only be scientific-technical top performance in any given area," the Politburo report to the 10th SED Central Committee session says.

Important Funds for Extending the Energy Base

In all social domains, the party organizations are now facing the task to organize party work and party controls concretely to that end. Their proper guidance comes from the Council of Ministers resolution, "On the Efficient Use and Saving of Electrical Energy, Heat, Fuels and Propellants and on the Elimination of Energy Waste Still in 1979," and from relevant party information.

The resolute implementation of our program for full employment, public prosperity and stability, assured energy supplies are of fundamental importance. Higher demands follow from that for the working people in the soft coal industry, the power plants and electrical transmissions systems, the gas production enterprises and the heat economy. At the same time our party proceeds from the fact that problems in the energy industry affect all society and are actively created in all domains.

Our socialist state invests enormous capacities and means in the further extension of an efficient energy base. The production of rough lignite, our most important energy source, was doubled since 1949. With over 250 million tons annually, the GDR produces more than 25 percent of the rough lignite in the world. Between 1949 and 1978, our electrical energy production rose from 17,300 to 96,000 gigawatt hours. In terms of per capita production, the GDR thereby became first within CEMA and is also ahead of such industrial states as Japan, Great Britain, France, Belgium and others. The sewer gas production went up almost fivefold since 1949.

All Citizens' Participation Is Necessary

Our party does not ignore the fact, however, that the further expansion of the soft coal industry and the supplies in solid, liquid and gaseous energy sources call for increasing economic investments. Open pits require more stripping, and the seams yield less, transportation routes become longer, and on the international markets all energy sources are becoming more expensive.

Many party organizations take that into account when, in their membership meetings, they come to grips with the fact that for solving our energy problems the responsible and creative participation of our party members and all the citizens of our country is necessary. Of course, an indispensable prerequisite is daily and hourly plan fulfillment in the energy industry itself. There the state managers have to create conditions that brook no deviation from the plan and make possible the overfulfillment of quotas and, in each and every case, the smoothest production conditions. It is advisable, however, that all party organizations stress still more emphatically the responsibility all domains of public life have for insuring our energy supplies.

Economy measures, mainly through the rationalization of energy-intensive processes, are by multiples more economical than using additional energy sources. Measures taken in energy rationalization in electrical engineering and electronics, for instance, yielded within one year a return-flow of 0.5 years, in transportation 0.9 years, in the building trade 1.4 years. Yet new investments in the coal and energy industry take from 15 to 17 years to equal that.

Energy saving reaches enormous dimensions through the growth of our energy base. One percent in soft coal, for example, amounts to 2.4 million tons, in petroleum to 200,000 tons, in electrical energy to 960 million kilowatt hours.

No Compromise on Energy Norms

Acting economically and responsibly thus means handling such important and valuable raw materials as solid and liquid fuels, electrical energy and gas economically and resolutely fighting against any frivolous and wasteful use of them. To develop such energy-counscious thinking and conduct ever more strongly is up to all party organizations.

What mainly matters now in our political-ideological work is to form the kind of public opinion and reach a level of management and controls that will absolutely insure an uncompromising observance of energy norms and energy consumption norms. Without our going off the deep end, it yet must become an ordinary habit not to switch on lights when they are not necessary, not to overheat rooms and not to use household electric gadgets at peak periods. These are measures for the rational use of energy that can be carried out at once.

We are also concerned, however, with future energy consumption. The development of products, technologies and installations must be based on qualitatively new criteria. For apartment houses and facilities, for example, the most efficient use of energy has to be assured from the outset. But this can only be so if it becomes a regular component of all new projects, designs and plans.

Fighting All Waste of Energy

The fight against the most rational and effective use of energy and against all waste thus becomes a task for all party organizations, a cause for every communist. Everywhere in our republic the firm conviction is needed that the thrifty use of energy in all forms is crucially prerequisite to further strengthening our country's material-technical base.

The party organizations in the industrial enterprises and combines bear a great responsibility here. Almost 40 percent of our consumption energy and more than 60 percent of our electrical energy production form our industrial energy base. Many party organizations are already very successful in their struggle for rational and efficient use of energy. Fine results and valuable experiences come mainly from the "exemplary energy industry enterprises." That includes the VEB Kalichemie Berlin which reduced its consumption energy intensity from 1975 to 1978 by 52.4 percent.

What has stood up well in our party work? What do the experiences of the best units tell us? And on what should the basic organizations concentrate in their political-ideological work?

First: The best results in the struggle for a high energy economy and against any waste of energy are found in enterprises and combines where managers assume fully their personal responsibilities to that end and where these tasks and problems have become standard procedure in party work and party control. That principally pertains to strict management of the work with energy balances based on norms that are justified in technical-economic respects. It has been found useful that more and more party managements have come out against any shifting of responsibility onto persons delegated and against narrow departmental interests.

Highest World Standards as the Incorruptible Yardstick

Second: In the rational energy use the greatest advances are made where the party organizations make the highest demands on scientific-technical work and rigorously guide the creativity of the researchers, designers, technicians, project chiefs and innovators in that direction. Their incorruptible yardstick must be the lowest specific energy consumption, at a world scale, for comparable procedures, technologies and products. On that the reconstruction and rationalization measures are concentrated too.

Good experiences have also been reported in exercising strict party supervision on industrial R&D energy projects. Many party managements are successfully cooperating in this regard with the enterprise sections in the Chamber of Technology.

Third: The struggle for rational energy use and against energy waste becomes a cause for all work collectives and all working people when the trade union organization turns it into a firm component of socialist competition. That applies to the work along technical-economic consumption norms, the reduction of the specific energy consumption in boilerhouses and on energy-intensive machines and installations as much as to the fight against wasting heat and light. The example of the VEB Kalichemie Berlin should more and more be emulated. There, competition is conducted publicly. They award a "best energy warden" and a "best energy worker" and a "best plumber of the energy industry" monthly.

Skilled Training for State Managers

Fourth: Many party organizations have started placing party supervision on the training and advanced training of the management cadre in the area of rational energy use. They also see to it that the proper selection is made of qualified cadre for the work in the specialized fields of the energy industry.

Great responsibility attaches to the party organizations in the enterprises, combines and facilities of the building trade, mainly for implementing the housing construction program. The number of modern apartments heated by way of long distance is increasing by leaps and bounds. In 1979, there were already 830,000 of them. The heat-containing quality of the shell facilitates energy saving of large economic dimensions. Through purposive work in projection and construction our building trade has already succeeded in reducing by 25 percent the projected heat requirements per apartment with the new WBS 70 series and the high-rise apartments, which meets the international peak level. These projected values must now be insured everywhere by a consistently higher quality of construction.

Further reserves have to be tapped in prefabrication, transportation and assembly. We have to achieve the highest qualities in element geometry and in the joint construction of elements and the technological mastery over the three-layer-panels in panel plants.

High-grade Work in Housing Construction Saves Energy

Circa 80 percent of the avoidable heat losses still occurs in the assembly of apartments. On the quality of that work of assembly depends from 80 to 100 years of energy gain or energy loss. One degree of temperature loss in heating our apartments and buildings is tantamount to 5 million tons of soft coal, which annually has to be extracted, transported and processed at an increasing rate. Every party management in the building trade would be well advised to apply this economic yardstick to its own high quality work. It is important to enforce more rigorously the unity between production within deadlines and high-grade work. To that the comrades of WBK Cottbus also have committed themselves in the letter they sent to Comrade Erich Honecker.

All fields of our public life consume heating oil and fuels. All party organizations thus bear a constantly growing responsibility to thriftily using these energy sources. Especially the party organizations of the German Railroad, motor vehilcle transportation and agriculture and the transport departments in the enterprises have the constant task to come to terms regularly with the saving of fuels.

Fuel Consumption Under Party Supervision

Reducing fuel consumption, optimizing transportation services and the fight against empty runs ought to become the centerpiece of party supervision. While many motor vehicle combines have already, in an exemplary fashion, organized a competition for reducing fuel consumption, there still are many instances in plant transport, agricultural enterprises and elsewhere where working along norms and competition are not yet brought to that point and manifestations of waste do occur. Those party organizations are doing a good job which combine their education for thrift and for fuel-saving modes of driving with a supervision that strictly insists on abiding by the government measures on lowering fuel consumption.

The same attention must be given to the consumption of heating oil. From 20 to 30 percent of the losses in heating oil is due to inattentive, irregular running of installations and boilers. Those are manifestations that can be done away with at once.

Enormous energy goes into our communal economy, public health, the educational system and so forth every day. Our population also consumes much energy. Those public areas alone have shown in the last 10 years increases in their energy consumption of from 5 to 6 percent annually, and in the peak periods particularly they are the main energy consumers.

Emphasis in this area must be given to the thriftiest handling of fuel of every kind, heat as well as electrical energy. Party organizations should exert an influence on requisite energy supply allocations so that, in enforcing the room temperatures decreed, we will permit neither cold apartments nor any waste through overheating.

Pankow Kreis Management has provided us with a good model. Its basic organizations primarily concentrate on affecting the heating competition in the installations there on the basis of technical-economic parameters, exercising controls on the functionality of the heat transmissions systems, and eliminating heat loss sources.

The Comrades' Responsibility in the Residential Areas

For saving, and fighting against the waste, of electric energy in the residential areas, the main thing is that the residential party organizations work closely together with the social forces in the residential areas and bring a still greater political influence to bear on the residential area commission of the National Front and the housing communities. Circuit organizations designed to economize plate current, and reducing the light in hallways as well as excessive street lighting are matters that call for the understanding and active support of the entire population.

The direct manner in which the party organizations deal with the working people and involve them in the solution of these economically important tasks is a decisive prerequisite for success in all our efforts and endeavors.

5885
CSO: 2300

GREATER CONCENTRATION OF INVESTMENTS URGED

Bonn INFORMATIONEN in German No 18, Nov 79 pp 10-12

[Background report by FRG Ministry for Inner-German Relations: "SED Politburo and GDR Council of Ministers Demand Increased Concentration of Investment Funds"]

> [Text] In future investment funds are to be more effectively employed in the GDR. That is provided by a "joint resolution of the SED Central Committee and the Council of Ministers on improving the efficacy of investments for the further strengthening of the GDR's economic efficiency," as published by NEUES DEUTSCHLAND on 10 November 1979. The wording of the resolution indicates the problems currently confronting the GDR economic leadership: To be stopped is the frittering away of investment funds in view of the steadily narrower scope for the use of industrial output within the GDR (declining economic growth, higher prices for raw material imports). The concentration of funds is designed to cut investment lead times. Moreover, additional rationalization investments are to help the invested moneys more quickly to bring about a rise in production.

By their joint resolution the SED and the GDR Council of Ministers have again drawn attention to the unsatisfactory development of investments. They clearly demonstrated their firm intention in future to devote even greater attention to these problems. As early as May 1978 Guenter Mittag, economics secretary at the SED Central Committee, stated that "definite economic disruptions are caused when, as happened this year, for example,extra plan investments amounting to billions are carried out." Such investments, especially in the construction sector--were initially described as "initiative constructions"; later they were branded "black constructions" which merely consumed resources without contributing to the growth of the "national income." Various publications disclose, though, that enterprises have managed, after all, to obtain for themselves some unsupervised leeway--despite voluminous regulations in force for the investment sector--, using it for, among other purposes, the construction of administrative and recreational facilities. As a consequence of that development new directives were enacted in July 1978, which required another check on all investment projects with reference to their economic necessity. The magazine DIE WIRTSCHAFT explained these directives in September 1978 in an article headlined "For the Greater Efficiency of Investment Operations"--similar to the title of the latest resolution by the SED Politburo and the Council of Ministers. This joint resolution is intended once more to "orient" economy managing organs to the more efficient use of funds.

Production Speed-up by Rationalization Investments

The details of the new requirements are as follows:

-- "Attention in the management and planning of investments...at all levels of the state and the economy must focus far more on productive accumulation...which will result in a rapid growth of output."

In future, therefore, rationalization investments are to have priority. Investment projects not directly affecting output (infrastructural measures) will have little chance of implementation. Admittedly, according to the resolution, "the investment tasks for housing construction, general education and the medical, social and cultural welfare of the citizens" are to be realized "according to plan."

These demands are nothing new; they were already enunciated in the "joint directive of the SED Central Committee Politburo, the FDGB federal executive board and the GDR Council of Ministers on the conduct of the 1979 plan discussion," published in July 1978. Then it was stated that "investment projects to be initiated in 1979 are to be restricted in favor of increasing the proportion of rationalization investments. Funds are...to be concentrated on projects which may be quickly constructed and assembled, while ensuring a good deal of growth of output with regard to rationalization aids in much demand, to export products, consumer goods, materials and components."

This would reverse a trend which is characterized by a decline in expenditure on machines and equipment in favor of construction investments:

The following is the percentage distribution of investments as shown in the "Statistisches Jahrbuch 1979 der DDR" [1979 GDR Statistical Yearbook]:

	1970	1975	1978
Equipment	52	50	48
Buildings	41	42	43

Manpower Savings

-- "With the aim of sensibly improving the efficiency of investments and considerably reducing construction delays it will be necessary to determine an economically justified sequence of priorities of projects."

This clearly shows that funds are to be reserved for a few major projects. "Consequently," said DIE WIRTSCHAFT in June 1979, "each project will be closely scrutinized. Each one must justify its start or further pursuit from the standpoint of current economic conditions. Many projects decided upon 5 or 10 years ago will not pass this scrutiny. Our investment scenery will therefore change fundamentally."

In future especially those investments are to enjoy priority, which will have a great impact on output as well as substantially contribute to savings of scarce manpower and expensive materials. It is constantly emphasized that considerable productivity reserves remain to be mobilized by the better utilization of the manpower now employed. In early November 1979 NEUES DEUTSCHLAND published an article entitled "Do We Have Too Few Workers or Too Many Jobs?" to draw public attention to this problem. Cited as an example was the Erich Weinert Control Device Factory which had asked for a larger labor force in 1980; subsequently rationalizers and scientific labor organization specialists demonstrated that the intended rise in output could be achieved with a labor force smaller by a third than the factory had claimed.

The increased use of microelectronics is to be the key with respect to the rationalization called for. The combines are also asked to contribute to the solution of the problems by substantially raising their own production of rationalization aids. Even further: The enterprises own construction departments are to be so encouraged "that they will be able even more efficiently to handle comprehensive maintenance and manage even greater services for the benefit of rationalization investments."

Drastic Cuts in Construction Periods

-- All investment projects must be brought to full operation in a highly concentrated manner and in definitely shorter lead times than has been the practice hitherto."

To be noted here is the appraisal of reserves submitted by the party and economic leadership: According to this "the construction periods for individual projects earlier determined must be...substantially curtailed--by at least one third on the average and, if possible, up to one half." We repeatedly learn from GDR publications that, when drawing up their calculations, enterprises tend to initially specify low investment expenditures; later it usually turns out that more money is needed, and this again results in delays before operations can begin. Moreover the extra plan investments mentioned earlier contribute to delays. The demand is therefore made "consistently to prevent the use of planned funds for extra plan projects." And yet there are still opportunities--and even the need--to proceed in the manner criticized: In the matter of initiative projects for the "improvement of working and living conditions in cities and villages" as well as for the expansion of "piped water supply in rural areas...the principle still applies that they are to be carried out without calling on state balanced material and equipment funds or construction capacities."

At the same time the necessary training of workers to operate the new machines tended to be just as inadequate as the provision of material supplies and markets for the new capacities. According to the joint resolutions more attention is in future to be devoted to these problems and also to accident prevention.

More Material Incentives

-- "To be raised is the personal material interestedness of the working people in the observance of the planned expenditure and the completion dates."

The earlier planning and valuation system of enterprises in the investment goods industries is to be changed in order to avoid aberrations such as occurred in past years. In future quality production and scheduled completion are to be rewarded more lavishly, and so will be the choice of "efficient solutions achieved at the lowest possible cost" and the "quickest realization of the projected efficiency parameters." Not decided yet is the type and extent of material incentives to be granted.

11698
CSO: 2300

BRIEFS

AGRICULTURAL AGREEMENT WITH SYRIA--The Peasants Mutual Aid Association (VDGB) of the GDR and the General Peasants Association of Syria have agreed to deepen their friendly relations. A corresponding accord was signed on Tuesday, 18 December 1979, in Damascus at the conclusion of a visit of several days by a VDGB delegation headed by Fritz Zeuner, first secretary of the Central Council. The accord provides for an exchange of delegations and experience and the training of cadres of the Syrian peasants association. [AU232115 East Berlin NEUES DEUTSCHLAND in German 20 Dec 79 p 2 AU]

CSO: 2300

HUSZAR DISCUSSES EXPLORATION OF INDUSTRIAL RESERVES

Budapest STATISZTIKAI SZEMLE in Hungarian No 11, Nov 79 pp 1064-1080

[Article by Istvan Huszar deputy premier, chairman of National Planning Office: "Our Achievements and Tasks in Uncovering the Industrial Reserves"*]

[Text] In accordance with its traditions, this year's annual traveling meeting of industrial statisticians and plant economists, the tenth one in sequence, again placed a timely question on its agenda. In today's stage of the Hungarian national economy, when we must proceed in the direction of reestablishing the equilibrium, in all areas of society and economy one of our most significant tasks is open up our reserves. I am using the expression "reserves" in the broader sense: I mean by it the most diverse, today still unexploited or insufficiently exploited resources. Namely, we have reserves not only in materials and energy, not only in manpower and even in work performance, but our industrial reserves are significant in combining these resources in a rational manner, organizing them, directing the production, and even in directing the industry, providing incentives, regulating, and even in the morale of doing the job, and also in the style of managing.

The first step in mobilizing the reserves is to take them into consideration in the appropriate depth. Such a social forum may provide the appropriate opportunity to do this in which the economists working at the enterprises, in the ministries, in planning, and in various levels of management can meet and exchange their ideas. I consider the Hungarian Economics Society and also this section of it to be such a forum.

In my study I wish to examine our achievements reached so far in opening up the industrial reserves and our future tasks, starting out from the present situation of the national economy.

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*Study submitted with the title "Our Tasks in Modernizing the Structure of Industry and of the Construction Industry" to the 10th anniversary traveling meeting of the Industrial Statistics and Plant Management Section of the Statistics Department of the Hungarian Economics Society held in Gyor on the 17th through 19th of September 1979.

The national economy's Fifth Five-Year Plan -- in harmony with the economic policy guide principles adopted by the 11th congress of the Hungarian Socialist Workers' Party -- has designated improvement of the national economy's equilibrium condition as the main task of our economic work, with the purpose of creating by the end of the plan's time period the foundations of future lasting and balanced growth. In the interest of improving the equilibrium situation the plan first of all made it a goal to reestablish the harmony between production, domestic consumption and the foreign trade.

Industry's role is very significant in achieving the designated goals, and in harmony with these goals the plan projects that besides increasing the industrial production at a more moderate rate than during the previous plan period, the so-called quality factors: increasing efficiency, modernization of the product structure, increasing competitiveness must receive more emphasis than before.

In the first three years of the plan's time period the tasks specified in the annual plans concerning the rate of production's growth, the main structural changes more or less agreed with the plan's medium-range projections. During the course of accomplishing these, such unfavorable trends gained strength in the last two years -- but especially in 1978 -- which endanger the firming up of the results we have already achieved, but which mainly jeopardize our future growth. A few of the most important ones of these trends are: the efficiency of society's production improved at a lesser rate than was planned; the rate of growth of the national income did not reach that projected in the plan; the material and equipment requirements of production increased; modernization of the product structure fell short of the requirements; the growth of domestic consumption (mainly of inventory accumulation) significantly exceeded that of production; export increased just barely, while in contrast with it the import significantly increased.

Due to the effect of these factors and of the world market changes which exerted their effects simultaneously with the former ones and which were also unfavorable for us, the goals serving to improve the national economy's equilibrium position were not achieved. In order to stop the mentioned harmful trends, or to eliminate them, further changes aimed at restrictions had to be carried out in the annual plan for 1979 -- even in comparison with the original goals of our five-year plan. According to the MSZMP Central Committee's 6 December 1978 resolution we must insure improvement of the national economy's equilibrium position by placing emphasis on the qualitative and efficiency factors. The rate of economic growth and domestic consumption must be subordinated to this goal. The above mentioned resolution of the Central Committee emphasized: "This is the way solidify the achievements we have thus far made in material production and in the development of our population's living conditions, in improving their standard of living, and to lay down the foundations for the conditions of future growth".[1]

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[1] Announcement about the MSZMP Central Committee's 6 December 1978 session. NEPSZABADSAG 8 December 1978.

At the same time the Central Committee's 29 June 1979 resolution called attention to the fact that in spite of the achieved results our progress thus far is still not sufficient to achieve the goals designated in the plan. "The qualitative changes in production, in economic operation, in improving the foreign trade equilibrium have not yet developed to the necessary and possible extent."[2]

Because of the stronger than expected and planned deterioration of the unfavorable trends of recent years, the 1979 annual plan specified a modest 4 percent growth of industrial production in the interest of improving the national economy's domestic and foreign equilibrium position. Based on the production results achieved in the first half year the industry fell short (3.6 percent) of this growth rate. But it is a favorable phenomenon (it indicates that the inventories accumulated at the end of last year are shrinking) that the increase in the sale of industrial products was a little larger (4.3 percent) than that of production. In the first half of the year the volume of export of industrial products exceeded the previous year's level by about 12 to 13 percent, within this by about 5 percent in ruble accounting and by about 22 to 23 percent in nonruble accounting.

According to the calculating data of the Fifth Five-Year Plan in the nonruble accounting export of industrial products in 1980 the ratio of the machinery industry should be largest (33.7 percent). Differing from this, the annual plans expected lower ratios from year to year, but the actual share of the machinery industry products in the nonruble accounted export of industrial products was even lower than this, around 24 to 26 percent, and decreased to 22.3 percent in the first half of 1979. At the same time the chemical industrial and metallurgical products of material character represented a significantly larger ratio in the export than had been planned. The export of ferrous metallurgy grew at an especially outstanding rate: in the first half of 1979, 73 percent larger volume of products were sold at about 15 percent higher prices than last year, and as a consequence of this their ratio was 19.5 percent in the export of nonrubble accounted industrial products. The share of export of food industry products increased slightly, while that of the light industrial products decreased.

The smaller than planned growth of the export of nonrubble accounted industrial products and its composition (the deviating product structure) is the joint result of several factors.

The effect of lasting recession continues to be felt on the capitalist world market, export competition is sharp, the protectionist trade policy is gaining ground, and the circle of competitors increased by numerous developing countries. At the same time the modernness, competitiveness of Hungarian industrial products is lagging behind the leading international standards. Export of the machinery industry's products is also hindered by the lack of building up a repair and service network, besides the not always adequate technological level of the products. Among clothing products there are relatively few such products which meet the foreign requirements with which most of the developing countries could not compete. All these circumstances made it necessary to -- at least over the short range -- export relatively large volumes of metallurgical and chemical industrial products of material character. But this trend does not meet our longer range structure policy ideas.

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[2] Announcement about the MSZMP Central Committee's 29 June 1979 session. NEPSZABADSAG 1 July 1979.

Our Productivity Reserves

In the first half of 1979 industry produced its production which increased at a more moderate rate than in previous years, with a decrease in employment the extent of which exceeded the average of the Fifth Five-Year Plan's time period. During this time period the number of people employed was 1.2 percent (19,500 persons) fewer than in the same time period of the previous year. Among industry's main groups -- in accordance with past trends -- the rate of employment decline was largest in the light industry (2.2 percent), 1 percent less in the heavy industry, and in the food industry the same number of people were employed as last year.

The increase in labor's productivity exceeded that of production: production per worker increased by 4.9 percent in the first half of 1979. The opening up of reserves is progressing well in this area.

Last year our industry's production level was about 60 percent higher than eight years earlier. Between 1971 and 1978 the Hungarian industry's productivity increased at a faster rate than those of the industries of the German Democratic Republic, Czechoslovakia and the Soviet Union, thus the lag of our productivity levels compared to the leaders of the European CEMA countries has decreased.

In spite of the relatively rapid growth, the Hungarian industry's productivity continues to lag behind the productivities of the industries of the developed or less-developed European capitalist countries, and of some of the socialist countries -- as witnessed by the bilateral and multilateral statistical comparisons. (According to the results of the 1970 comparisons industry's productivity was 140 percent higher in France, 100 higher in the German Democratic Republic, 87 in Czechoslovakia, and 60 percent higher in Austria than in our country. Even though the domestic industry's productivity grew faster in the 1970s than it did in the partner countries, this was only enough to decrease the lag. At the same time in such socialist countries with relatively low productivities as Bulgaria, Poland and Romania the industrial productivity grew faster than in Hungary.)

Changes in the productivities of two important branches, the machinery industry and the chemical industry, had significant effects on the way the level of industrial work productivity developed.

The change in the level of machinery industrial productivity -- compared to the European CEMA countries -- shows a more unfavorable picture than that of the industry as a whole. Our machinery industry's productivity increased by an average of 7.0 percent per year between 1971 and 1978. Essentially this rate was comparable to the growth rate of the Czechoslovak machinery industry's productivity growth rate, and it is higher than that of the machinery industry of the German Democratic Republic only. In the last eight years the productivity levels of the Czechoslovak and Hungarian machinery industries increased similarly to each other, by about 70 to 75 percent. Between 1971 and 1978 the machinery industry's productivity — among the European CEMA countries — increased 2.1 to 2.2 times in Poland and in Bulgaria, and by about 85 percent in Romania and in the Soviet Union, surpassing the extent of the domestic increase by about 10 percentage points. We still have a lot of internal reserves in this area.

The increase achieved by the productivity level of our chemical industry between 1971 and 1978 can be judged as favorable. Dynamic development of most of the chemical industry's specialized branches, the chemical industrial investments, modification of the chemical industry's structure coupled -- presumably — with higher than average efficiencies.

Our chemical industry's productivity level increased by an average of 10.1 percent in the years between 1971 and 1978. The level's rate of increase was highest in our country among the European CEMA countries, and with this the productivity level of the Hungarian chemical industry in 1978 surpassed that of eight years earlier by nearly 120 percent. In the time period under study Romania's chemical industry doubled its level of productivity, and in the other European CEMA countries the extent of the increase varied between 70 and 90 percent.

First of all that can be filtered out of the international comparisons that there still are large reserves concealed in our industry's productivity. Part of these reserves can be mobilized directly because they depend in general on the profitability of industrial production, more closely on the efficiency of performing the work, and not on various, for the most part lower technical, technological levels. That is, in the final analysis the often mentioned strenuous manpower situation is the consequence of not the lack of personnel but of the low efficiency of using the available manpower.

Significant reserves are concealed besides raising the level of labor's productivity, in modifying the composition of employees, regrouping the number of people employed, and even more so in helping employment regroup itself, in providing the incentives for it.

Now the manpower available in the national economy must be preferentially directed to the area of services, and in industry the main task is more efficient employment of the available manpower. One of the methods of this is to mechanize the auxiliary activities -- and within this primarily the material handling -- comprehensively and in harmony with the basic processes, and redirecting the manpower which thus becomes available, to other areas (places of employment).

According to the latest -- 1977 -- observations of the Central Statistical Office concerning industry under the ministries:

--in the domestic industry the number of people doing auxiliary (physical) activity continues to be unjustifiably high in comparison with those who do direct productive activity, and in this respect no favorable change has occurred in the last five years either;

--in part this can be traced back to the fact that the new investments placed into operation during the time period of the Fourth Five-Year Plan as well as the more significant reconstructions are directed primarily at mechanizing the basic productive processes of work and in practice these did not decrease the manpower requirements of the auxiliary activities;

--due to the lack of comprehensive mechanization the number of people doing material handling, transportation and warehousing activities in industry continued to increase also during the last five years (by about 7 percent in comparison with 1972); this is even more conspicuous since the total number of physical workers remained essentially the same, and the number of those employed in the basic activities decreased;

--significant expansion of the machinery inventory was accompanied by an increase of repair and maintenance requirements and as a consequence of this the number of repair and maintenance personnel increased by about 14 percent between 1972 and 1977; the growth is typical for the majority of industrial branches, thus it can be assumed that a greater extent of concentrating the repair activity -- by the branch and (or) geographically -- could moderate the employment requirements connected with this;

--in spite of the shortcomings of comprehensive mechanization the level of mechanization of industrial work significantly increased in the time period under study; in 1977 half of the physical employees of industry under the ministries worked with machinery; this ratio is only about 3 to 4 percentage points lower than that level of mechanization which characterized the industry of the German Democratic Republic in the first half of the seventies.

Besides continued mechanization of the auxiliary activity the reserves in manpower management still exist on many levels in industry. We have large reserves in the utilization of working time in the qualitative and quantitative sense by some of the workers, as well as in plant and work organization and also in whether economical or uneconomical enterprises or branches tie down the manpower. Promising initiatives have already been taken in some areas to open up and put to use the reserves, in other areas we will have to take these steps in the future.

There is improvement in the utilization of working time -- at least in the extensive sense. Compared to the first half of the seventies the whole-day absences have decreased. In round numbers there was one less whole-day absenteeism per physical worker in 1978 than in 1976. It increases the value of the indicated improvement that at the same time the number of paid vacation days increased, thus the number of spontaneous absences -- which in some cases can be labeled undesirable -- decreased relatively more strongly. Especially the absences due to illness have decreased.

One of the most significant reserves of manpower management is the definite increase of the incentive-supplying function of wage management and the moderation of the so-called distributive functions. In spite of passing the resolutions and defining the guide principles, in practice we have done very little thus far in this area. The trends which can be deciphered from the way wages and incomes have developed in the last 2 or 3 years also indicate this.

The relatively significant wage level increase which took place in the last 3 years can be observed in practically all strata of those employed in the socialist industry. Thus the generally moderate differences exerted their effect in the direction of equalizing the wage levels, that is, of continued equalization. The lack of balance between manpower supply and demand resulted in the undifferentiated increase of wage levels through wage management by the enterprises but also through the central wage measures. The rise of the wage level was influenced most definitely by the way the number of people employed developed. Close correlation can be observed between the decrease of employment and increase of wages. At the same time there is no direct correlation between the wage developments and the indices which reflect the efficiency of economic operation.

The fact that due to the effect of mainly standard-of-living policy considerations in recent years the wages increased fastest for the lowest wage level strata of the population, indicates the dominant role of the so-called distributive function of wage management.

The opportunities concealed in improving the rhythmic character of production form a unique area of industrial reserves. The general efforts aimed at increasing efficiency and improving work organization did not cause a basic turnaround in recent years with respect to making the industrial production smoother. For example the difference between the months with the highest and lowest production levels (December and January, respectively) within the same year increased between 1970 and 1976 -- besides the annual fluctuation --, and some improvement occurred only in the last two years.

It is characteristic for the extremely uneven release of products that in 1978 for example the December production was 2.5 times the January production in the instrument industry, 2.3 times in the communication and vacuum technology industry, and 2.0 times in the subbranch of the manufacture of machinery and mechanical equipment.

The harmful effects of lack of rhythm are manifold and cause losses not only to the producing enterprises. The largest losses which occur at the producing enterprises are caused by the uneven loading of manpower and production equipment. Employment and mechanical capacity which are sized to accommodate the production of peat periods are far from being fully used in the "valleys" which besides the actually occurring costs -- wages, amortization, benefits, etc. also unfavorably affect the labor discipline. Another significant loss source is that the ratio of rejects increases for products made in rushed work, during strenuous overtime, and the quality of products deteriorates. This increases the repair costs the production enterprises spend for such purposes, and at the same time the inadequate quality products also cause losses to the purchasers, and in the case of export particularly harmfully affect the recognition, appreciation of Hungarian work.

Smoothness of production is hindered by shortcomings in the material supply and lack of cooperative links among the producers. Starting out from the conditions which have developed in recent years -- and which are not really improving -- the enterprises are increasingly adopting the position that from the viewpoint of smoothness in their turning out the finished product and also of their entire production activity it represents greater security to develop the vertical distribution of work within the enterprise, rather than external cooperation which involves many uncertainties and problems. Among the larger enterprises the effort is quite general to endeavor to create their own background industries, cooperative basis "within the gates". This in the one hand is often uneconomical, and on the other hand in many cases it can be solved only by taking over small enterprises, which in turn may cause a shortage in other products.

The "mother enterprises" in general unanimously consider mergers of this type executed on the enterprise's initiative to be advantageous, even if the reorganization and profile change (and the training involved in it) involves significant additional costs, and temporary lack of utilization of the manpower and of the production equipment.

Undoubtedly the workers of the small operations which earlier independently received hardly any development means, can work with more advanced technologies after the merger -- and after appropriate expenditure of means --, which also improves the national economy's efficiency. But conforming to the production goals, more concentrated product selection of the large enterprises the product spectrum of fulfilling the needs often becomes narrower on the national economy's level, and the industrial cooperative opportunities also deteriorate. It is also a frequent consequence that the merged units also close out their earlier cooperative relationships in other directions. Thus in the final analysis then the advantages which were present for some of the enterprises will for the most part be lost on the national economy's level. Thus, summarizing what has been said, we can achieve adequate results only by the planned, coordinated development of industrial cooperation and of the background industry.

Our Products, Quality of Our Manufacturing

During the course of examining the reserves the question of the quality of manufactured products cannot be ignored. Even though good quality is primarily the basic criterium of the saleability and competitiveness of the products, but beyond this it is also to be considered as one of the not insignificant foundations for saving resources -- material means, work investments.

According to the witness of data, a portion of the investments is being wasted on rejects, and this type of waste shows an increasing trend. For example at the national enterprises and industrial cooperatives belonging under the branch direction of the Ministry of Metallurgy and Machine Industry [KGM] in 1978 because of faults in the materials, purchased spare parts and subassemblies used for production, which faults were discovered during processing, 40.4 percent more damage was generated than in the year before, and 18.8 percent more damage than the year before due to rejects generated internally or during work. The cost of guarantee obligations related to the quality of products released was 12.9 percent more than in the previous year and 146.9 percent more costs were incurred than in 1977 due to quality penalties and reimbursements for damages. The total damage incurred by enterprises and cooperatives under the direction of the Ministry of Metallurgy and Machine Industry exceeded the sum of damages incurred in the previous year by 19.6 percent.

Net damage -- reduced by the quality penalties and damage reimbursements received -- related to the price income of the basic activities of the enterprises and cooperatives was 1.48 percent in 1978.

Among the damage components the largest one in size is the 18.8 percent increase of internal or work rejects compared to the previous year. In 1978 this represents the largest ratio (62.8 percent of all damage).

Besides the manufacturing (internal) rejects the cost burden of repairs made under guarantee represents the largest volume. The cost increase of repairs under guarantee indicates that at some of the enterprises -- mainly at the ones manufacturing items used by the general public -- the outlook is gaining more and more ground that the repair under guarantee is the last phase of the manufacturing process, thus the repair under guarantee is a "reserve" of the manufacturing capacity.

Beyond the above numerical data the quality-related problems are also illustrated by the complaints of foreign buyers. For example the market's opinion is unfavorable about the quality of some machine tools. Even though the construction fulfills the requirements of the buyers and the technical level also meets the international standards, but the unreliable operation, the series of breakdowns deteriorate the market position by an extraordinary extent. The faults caused by irresponsibility and careless workmanship can be corrected only with significant additional work and costs, and they also harm the product's good name on the market.

Increased sensitiveness to quality on the part of the capitalist partners and in a number of cases also by the socialist customers requires increased care in quality control acceptance.

Our Material and Energy Expenditures

Because of the technical level of its products and because of its production structure the Hungarian industry's material needs are very high. During the time period of the Fifth Five-Year Plan we are spending 67 forints in materials for 100 forints of gross production value, thus this area almost begs that its possibilities of better economic operation and domestic reserves be discovered. Even the smaller savings can produce results in the millions for the national economy. Yet the growth rate of the total material cost on the basis of current prices was 9.6 percent in the last three years, exceeding the 8.8 percent growth rate of gross production and 9.1 percent growth rate of the net sales income.

By emphasizing that significant decreases in the material expenditures and energy costs can be achieved only by remodeling the production structure, it is worth examining the content of the material costs, because even within the limits of the present production structure we have opportunities to take measures to promote better economic operation.

The quantity and price of imported materials used significantly influence the net material costs. The ratio of products imported by the national economy -- qualifying as materials and consumed mainly in the industry -- (without the energy sources) increased from 26.8 percent of industry's net material costs in 1976 to 29.5 percent in 1978. At the same time the ratio of import decreased in the national economy's consumption of some of the more important materials. Thus for example the ratio of import decreased between 1977 and 1978 from 60.4 percent to 52.8 percent in coke consumption, from 53.3 percent to 35 percent in caustic soda consumption, from 50.9 percent to 34.6 percent in powdered PVC consumption, from 35.2 percent to 21 percent in wood board consumption, while at the same time the ratio of import increased for a whole series of materials, which in several cases could be replaced by domestic production.

Another important factor of the net material costs is the way consumption of the energy sources obtained also mainly from imports, and of electrical energy have developed. The ratio of these appears to be stable since 1976, approaching 15 percent of the net material costs. Between 1976 and 1978 industry's net material cost increased by nearly 31 percent, the national economy's material import by 20 percent, and energy costs also in the order of magnitude around 20 percent.

In industry the cost of energy in 1978 approached 69 billion forints, from 1976 through 1978 the increase was nearly 10 billion forints. The national economy spent 32 billion forints in 1978 to import energy sources -- including electricity also --, nearly 11 billion forints more than in 1976. A large portion of this served industrial purposes. With such large expenditures disciplines observation of the coordinated energy saving measures, compulsorily by all enterprises, institutions and individuals can be considered a significant reserve.

Imported material and energy costs represent about 42 to 44 percent of the net material expenditures in industry. The increase of these was more moderate than that of the entire material consumption. This warns us that even though our unfavorable raw material situation and our increasing energy needs necessarily determine a portion of our material costs, even with the present product structure more than 50 percent of the material costs spent for production purposes remains, which could be decreased by cheaper substitute materials, application of more modern technological processes, energy savings, better utilization of scrap materials.

It is worth it to talk separately about scrap management. Countries much richer than ours pay more attention to such byproducts and scrap with which they save values in the billions. As it is well known, in certain definite areas a large part of industry's raw material needs are supplied by scrap. This is the way it is in ferrous and nonferrous metallurgy, in the paper industry and also in the textile industry. Yet until now collecting these was done for the most part on the campaign basis, preparation of the scrap was omitted, often the equipment necessary to do it is not available. But we could also achieve significant import savings through the scrap materials. The national economy's need for steel scrap for example exceeds 2 million tons per year. Yet the number of collection places decreased, sorting out the mixed scrap has not been solved, the size reduction and classification capacity is narrow, the equipment of the collecting enterprises necessary to do this is insufficient. Similarly the nonferrous scrap metal management is also inadequate. In nonferrous metallurgy for example scrap provides about one-fourth of the raw materials for copper and copper alloys, and more than 30 percent for lead. Sale of nonferrous metal scrap moves on a forced path, collection is done in an organized manner only at the large and mediumsize enterprises, even though -- due to the lack of our own processing capacity -- we even have export opportunities of these scraps. In 1978 the collection and utilization of paper scrap also decreased.

Within the total material cost the increase of other costs of material nature has been 13 percent per year since 1976, thus significantly faster than the net material costs of direct production, or that which serves operational purposes. Even though this cost group includes primarily the general overhead costs. By its content the travel costs of cooperative projects in connection with the foreign trade enterprises, domestic and foreign travel costs, administrative materials, repairs caused to be done by other organs, maintenance, upkeep, guarantee repairs caused to be performed by foreign enterpreneurs, costs of magazines and trade journals, wage costs for setups produced by the enterprise itself, freight and loading costs not built into the prices of the materials, merchandise shortages, etc. are to be included in this.

Naturally the items listed do not include all overhead costs of material nature, but it can be sensed even so that there are also such cost factors among them which are part of the undisturbed work, such as for example the representative's fees paid to the foreign trade enterprises. But the nature of most of the costs is such that it would be easier to decrease them by better economic operation than the ones closely related to production. Yet these miscellaneous costs of material character increased from 39 billion in 1976 to over 48 billion in 1978 and exceeded 10 percent of the net material costs. Thus reviewing the expenditures of overhead character allows a wide berth to the frugality measures of all enterprises.

Another oft-debated area of our material management is industry's supply of inventories, the circumstances of keeping these inventories, high accumulation of inventories with respect to our country's abilities, and the reasons for it.

On 31 December 1978 industry's inventories amounted to nearly 47 percent of the national economy's total inventory. This ratio is the same as in 1975.

Average growth in the value of inventories was 9.1 percent [per year] between 1976 and 1978, it did not reach the 9.6 percent annual increase of material costs, but it grew faster than production and at the same rate as sales income. Industry's 1 January inventories covered 36 percent of the subject year's consumption in 1976 and also in 1978, and covered 25 percent of the gross production. Thus the ratios were balanced, as was the distribution of inventories according to degree of preparation. [About] 69 to 71 percent ratio of materials and consumption goods, 15 percent unfinished and semifinished products, 8 to 9 percent finished products and 4 percent products for sale characterized the composition of industrial inventories in the last three years.

The level of material inventories settled around 70 percent deserves particular attention because the methods of better economic operation must be worked out at this point. The high material inventory indicates that material supplies are not balanced in many areas. Deliveries according to orders can often be criticized from the viewpoints of quantity, quality, selection, deadline, therefore the enterprises form reserves. By this the users are in possession of significant inventories, instead of commerce taking care of the continuity and certainty of supply. Thus the committed means of industrial enterprises are high, and under the restricted credit conditions the financial troubles are not infrequent either.

The inventory situation can also be improved by firming up the domestic supply discipline, primarily by improving our domestic market conditions, moderating the advantages derived from the monopolistic situations of the producing industrial enterprises and by more active commercial activity, by eliminating the unnecessary reserves.

According to the data of the first half of 1979 the material cost spent for 100 forints of sales income increased from 52.20 forints to 53.40 forints. The ratio of energy costs did not increase within the net material costs, and the value of inventories decreased by 7 percent. Within the total industrial inventory the ratio of materials and consumption goods decreased by 4 percent by 30 June with respect to 1 January. Data of the outstandingly important products from the national economy's viewpoint, observed in the natural measuring units, also indicate the decrease of inventories. In the first half year metallurgy made up for its significant deficit which occurred in the area of export, therefore the decrease of inventories is larger here. The chemical industry achieved results worthy of mentioning in the area of inventories in connection with developing the plastics industry. There are also significant reserves in the rationalization of the use of energy which is rapidly becoming more expensive -- also taking into consideration the international experience connected with this.

The way the production volume and structure of the basic energy sources develops is determined by a number of components -- primarily the geological conditions, the technological and economic conditions of production, processing and use, international price ratios of the individual energy sources. The petroleum shortage and the increase of petroleum prices has an invigorating effect on exploiting the sources which earlier had been judged to be uneconomical, and naturally all over the world the interest in coal is on the rise again, as are the efforts aimed at exploiting the water, nuclear and geothermal energies. In our country primarily the planned Eocene program, and the Paks [a city] Nuclear Power Plant which is expected to begin operation in 1980 indicate materialization of this process.

Between 1970 and 1973 the energy consumption of several socialist countries (for example the Soviet Union, Romania, Poland, Yugoslavia) and capitalist countries (for example Austria, Belgium, France, Holland, the Federal Republic of Germany, Italy, Switzerland) increased faster than our country's. The energy crisis which exploded in 1973 led to strong polarization: the growth rate of energy consumption by the socialist countries -- including Hungary -- changed hardly at all (for example in 1973 the CEMA countries used 15.4 percent more energy than in 1970, and 14.9 percent more in 1976 than in 1973), but in the majority of the capitalist countries energy consumption decreased or remained at a standstill (for example the 1973 energy consumption of the European Economic Community was 12 percent higher than in 1970, but there was a 0.2 percent decrease between 1973 and 1976).

During the time periods of the Fourth and Fifth Five-Year Plan the rapid growth of our energy consumption was justified by several important factors in numerous areas of our economic growth:

--the general technological growth, primarily the mechanization exerted its effect in the direction of increasing the energy consumption;

--within the industrial production the development of metallurgy and of the energy-demanding areas of the construction materials industry (brick, cement, precision ceramics, glass production, caustic soda production, petroleum refining) involved significant additional energy requirements;

--the intensification of agriculture, development of transportation and traffic, rapid rate of mechanization of the population's households also increased the energy demand;

--modernization of the technologies, development of optimum plant sizes on the other hand in some cases decreased the specific energy demand, and thus moderated the growth rate of the volume of energy consumed.

Development of the energy consumption in a different direction became emphasized particularly in the case of liquid fuels -- gasoline, petroleum spirits, diesel oil, fuel oil, liquefied petroleum gases --: while in 1976 the CEMA used nearly 18 percent more, Yugoslavia about 21 percent more liquid fuels than in 1973, consumption by the European Economic Community decreased by almost 8 percent, Austria's by 5.2, Switzerland's by 20.5 percent, and even the USA's increased by only 1 percent.

As a consequence of the rapid rate of growth of hydrocarbon consumption and decline in the use of coal (to which the rapid decrease in the average heating value of coal used also contributed) our country's energy structure changed significantly between 1970 and 1978: in 1978 hydrocarbons made up more than two-thirds of the consumption of energy sources. It can be established even in spite of the rapid rate of change of the ratio of hydrocarbons that the weight of coal-type sources in the domestic energy structure is much greater than in the majority of the capitalist countries.

Our Reserves In the Structure of Production

One of the main economic tasks of any country which has reached at least a mediocre level of development is to develop, modernize the industry's production structure in such a continuous way that as the result of it the industrial products will satisfy in the best possible manner the demands of its conestic consumers and of its foreign customers, and at the same time also fulfill the efficiency and equilibrium requirements. The shaping of structure is a particularly important task in such a country as ours, the size of which is relatively small, its natural resources are limited and its foreign trade is necessarily large.

Industry's branch structure -- based on gross production measured at comparable prices -- changed during the time period of the Fifth Five-Year Plan until now for the most part in accordance with the projections, continuing the trends of the previous five-year plan's time period:

--the ratios of mining, metallurgy, light and food industries decreased,

--the ratios of the electrical energy industry, machine and chemical industries increased,

--the ratio of the construction matieral industry's production remained essentially unchanged.

The extent of the change was also similar to the plan, excepting the food industry: that is this branch's share of the production decreased more than had been projected which is unfavorable considering our conditions, the domestic demands and the export opportunities.

Comparison with the international trends is not without interest in this topic either. The following points become apparent from this:

--in comparison with the other European CEMA countries it can be established that the branch structure of our industry changed between 1960 and 1970 essentially similarly to those of these countries; it is favorable that our chemical industry developed relatively more rapidly, and that its production ratio was the largest in 1978 in our country among all of the countries examined;

--performing the comparison with ten European developed capitalist countries (for 1960 to 1972) (on the basis of material-free production values), then supplementing the results of the examination with information of approximating precision for the years of 1971 through 1976, it can be established that the trends are similar; however it is unfavorable that the ratios of electrical energy production and of the food industry were still much lower in 1978 than in the majority of the countries in the study.

It is well known that the branch structure can change significantly only over a relatively longer time, and that the slowly developing branch structure is essentially only a framework for one of the essential processes leading to the achievement of the national economy's main goals: the theoretically faster changing of the product structure. The following brief review will provide a picture of thė changes in product structure by the branch which could be seen in recent years, specifying in advance that I will treat ~~the~~ two so-called progressive branches, the machinery industry and the chemical industry, and the characteristics of the energy strucutre only relatively briefly.

The production ratios of ferrous metallurgy's main manufacturing phases with respect to each other and the branch's product sturcture have developed unfavorably in recent years, even though it cannot be left out of consideration that large sums of investments and relatively longer time are needed for significant changes. Steel production fell short of the demands of the rolling works, and because of this the steel and semifinished product imports (mainly from the ruble-accounted relations) became larger and larger. Production of the so-called secondary processed products, mainly of hot rolled pipe did not increase as needed. Among the rolled steel types the ratio of sheet steel decreased; improvement can be expected only when the reconstruction of the roller works at the Danubian Iron Works will be completed. The share of alloyed products decreased in shaped steel rod production, because the product composition of the new noble steel roller works, built with several billion forints of investment, differs significantly from the plan.

Continuous -- though more moderate rate than in the original projection -- implementation of the aluminum program produced significant results: in 1978 the alumina production was 77.3 percent higher, rolled-pressed-extruded aluminum production 84.5 percent higher than in 1970, and aluminum consumption per person increased to a level which is high even in international respects, to more than 13 kilograms. But it is unfavorable that partly due to the delays of some investments the product composition is not always in harmony with the domestic needs, and because of this in some cases there is also a need to import some processed aluminum products.

Development of the machine industry's product structure was (and is) very significantly influenced by the modernization of the structure of transportation equipment manufacturing -- based on the public highway vehicle program completed in 1975 -- and by the continuous implementation of the computer technology program. Significant results were reached in increasing the manufacture of modern light sources, various miscellaneous vacuum technology products and equipment, and also in the improvement and modernization of the production of household refrigerators and medical instruments.

But the product structure's change is slower than necessary in the entire machine industry. The fact that even now only about 13 percent of our machine industry's products can be sold on the capitalist market which is presenting higher and higher requirements, and even that not always profitably, indirectly refers to this and to various shortcomings in modernness and quality. Machine industry products represent only 25-26 percent of the export of industrial products to capitalist countries, falling significantly behind almost all European developed capitalist countries. The role of the backwardness of spare parts and subassembly production, lack of development of the so-called background industry, and of our relatively small participation in international cooperation are particularly significant among the hindering factors.

Parallel with the dynamic growth of production the chemical industry's product structure was also modernized by a large extent:

--as a result achieved so far by the petrochemical program a basis has come into existence for the production of significant amounts of plastics and plastic raw materials;

--domestic chemical fertilizer production grew at a rapid rate in recent years, by about 14 percent per year;

--the pharmaceutical industry--based on a research basis which is advanced even by international standards -- increased its production dynamically, new pharmaceuticals are being introduced each year, and the process of diversification (mainly the production of plant protecting chemicals) has also gained ground.

But several factors hinder the faster growth. For example the increased modernization of the strucutre of chemical fertilizer production is being unfavorably influenced by the lack of necessary harmony between producers and users, and also the expansion of new capacities fell behind the growth of plastic material production. Even now more than 90 percent of the export of pharmaceuticals to capitalist countries is base materials for medicine, increasing the ratio of packaged, finished medicines requires more vigorous concentration of the existing research capacity, increase of the research and development expenditures.

Development of the decisive majority of light industrial branches was or is influenced basically by the already implemented reconstructions or the ones in progress. As a result of the essentially completed furniture industry reconstruction the quantity of production increased significantly, but the modernness, selection and quality of the products is still not satisfactory. Under the influence of the paper industry reconstruction now just short of completion, in recent years the ratio of the production of packaging paper products, among them mainly of corrugated paper increased significantly. The initial results of the printing industry reconstructions are also significant.

The situation is less favorable than expected in the clothing industry's branches which are carrying out the largest reconstructions. Due to the combined effect of several factors (the synthetic materials gaining space, the accelerated technological progress differentiated by groups of countries, the sharper and sharper international competition, etc.) the main branch, the textile industry in the last 10-15 years became a particularly sensitive area of industrial progress all over the ovrld. The world market has become polarized: a significant part of the developing countires make stylish, cheap, mass products, the majority of industrially developed countries are on the other hand setting up to produce "demanding" products which require high intellectual and technological preparation and are made of modern materials. Specialization, foreign trade and international production cooperation are gaining more and more space. The Hungarian textile industry's characteristic new profile -- which can be considered a resultant of the influences mentioned and of the domestic changes of demand -- has not developed yet, therefore the foreign trade sales of our products has not stabilized yet either.

During the course of the textile industry's reconstruction some undoubtedly significant results have been achieved:

--the production ratios of certain more demanding, more valuable products bearing more intellectual work, among them numerous new products (rugs, domestic textiles, thin silk jersey cloth, shrinkresistant denim cloth, etc.) increased;

--production technology became significantly more modern (open end spinning has gained ground, the ratio of automated and new system weaving machines increased);

--the shares of knit fabrics, nonwoven textiles, and also of artificial leather, fiberized plastic products, split foil increased (even though the 72 percent ratio of woven cloths is still much higher than in the developed countires);

--the ratio of synthetic fibre containing cloths used has increased vigorously.

Beginning successes have been achieved in "subcontracting" the capacities of less economical clothing products, but ones which fulfill a basic role in supplying the population, to friendly or to developing countries. But the produciton ratio of products produced within the framework of these connections is still relatively low, implementation of the cooperative projects is progressing very slowly.

Modernization of the product structure is progressing at a slower than necessary rate in the textile and textile clothing industires in spite of the results achieved. On the one hand the approximately 5 percent ratio of products planned to be eliminated in each branch is too small, and on the other hand the development of products is not sufficient in extent and not sufficiently continuous. The main factors of this are: lack of harmony in the vertical relationships, backwardness of the so-called background industry of the clothing industry, shortcomings of organization between the enterprises (and in some cases within the enterprises), the onesided "finished product orientedness" of providing the incentives.

The world's population increased faster than food production did. Therefore the demand has increased on the world market for foodstuffs, and in paying for the import of energy sources, raw materials for other than the food industry, machinery, etc. the role of food export is increasing. Besides fulfilling the domestic demand, this circumstance increases the significance of further developing our food industry, and the necessary conditions are available to us for this (relatively advanced agriculture, increasing processing capacity in the food industry). But the development must also be accompanied by structure modernization to conform to the requirements, thus the production ratio of the biologically more valuable foods must increase vigorously.

From the viewpoint of the foregoing it is favorable that between 1970 and 1978 the approximately 39 percent growth of the food industry's production -- which is quite moderate in international respects and in comparison with our capabilities -- was significantly exceeded by the growth of the manufacturing branches producing products of animal origin (mainly the meat industry, poultry processing, production of dairy products) and by the growth of soft drink production.

The growth rate of producing quick-frozen and vegetable oil processed products did not meet the demand, even though it exceeded the average. It is unfavorable from the viewpoints of domestic consumption as well as of the export that expansion of the production capacities made significant increases in the production of the valuable meat products (mainly of dry sausage and salami) only in the most recent years. It is also unfavorable that the growing of plants which require more labor and which are more sensitive to the weather, which provide relatively smaller profits, have been deemphasized in the last decade. As a consequence of this the vegetable and fruit productions were very variable in quantity, selection and quality and this caused fluctuation in the manufacturing and structure of the canning industry's products. Due to the decrease of sugar beet growing (and of the sugar content) large volume and expensive sugar import was necessary in the years of 1973 through 1975, and sugar production covered the domestic need only since 1977-1978.

The way food exports developed in nonruble relationships deserves particular attention. The value of food industry's product export amounts to 22 to 24 percent of the total value of industrial products exported in such relationships, which is a significant share even in international respects. In addition this is supplemented by unprocessed foods exported by the agriculture (their ratio fluctuates strongly from year to year).

For years the largest share of nonruble accounted food export have been the meat industry and poultry processing industry's products, in 1978 the ratio of the former was 44.1 percent and of the latter 24.9 percent.

Among the meat products the demand for live cattle and raw beef on the capitalist market and the export prices of these have been characterized by large fluctuations in recent years. (We cannot make continuous exports of live hogs and pork to the capitalist markets, the demands are small.) In 1970-1971 for example the capitalist market export price of slaughter cattle averaged at US $606.-per ton, US $1,138.-in 1973, US $987.-in 1978. In 1970 they paid US $1,084.-per ton for raw beef, US $2,065.-in 1973, the present price is barely higher than the 1970 price.

At the same time there is a demand for pork products, the export conditions are better balanced. The per ton price of salami increased from US $2,156.- in 1970 to US $4,070.- in 1976, of canned ham from US $1,265.-to US $2,499.-

In light of all these it seems contradictory that even in 1978 (at a lesser rate than in 1972) 49.0 percent of our nunruble accounted meat export was slaughter cattle and beef, and the pork products (for the most part salami and canned ham) amounted to only 16.4 percent. Capacity expansion made it possible to increase the ratios of the latter only since 1977-1978, and further increases are made more difficult by the sharp competition. The occasional quality problems and deviation of the product structure (mainly of spicing) from the demand also hinder it or slow it down. Naturally the complete fulfillment of increasing domestic demand also places limitations on the larger export.

The non ruble accounted export of the poultry processing industry's products increased dynamically until 1977, its foreign currency production indices also improved. Competition became stronger in 1978 because of the strong increase of slaughter chicken production all over the world, and the prices also decreased; our export declined in comparison to the earlier years in volume, but mainly in value. Some improvement could be seen in recent months, but it appears probable that the product composition and market offerings of our poultry processing industry will have to be modified (for example raising and slaughtering geese and turkeys instead of chickens), if we want to increase our export.

From the foregoing we can conclude rather unambiguously that we have very significant reserves in our industry in all areas of the economic processes. We have already achieved modest results in opening up a part of these reserves, but we must consistently continue this work in the coming years also.

I wish to deal with two more issues in my study: on the one hand with the developments which can be expected in 1979, and on the other with some of the main development trends of the national economy's plan for 1980.

As far as the national economy's expected development for the year is concerned, the national income will increase by less than was planned due to the lower than planned net production in agriculture; in spite of the more favorable tendencies achieved in the first half of the year, the overall efficiency of society's production will not improve significantly either; domestic consumption will be less than in 1978.

In the ruble accounted trade both the import and the export are expected to reach lower levels than were planned. The dollar accounted export may turn out near the projections, the import volume is expected to decrease less than planned. We must also expect that the population's consumption -- due mainly to the effect of the July price changes -- in all probability will not reach the planned level.

The 1979 national economic plan projected significant tendency changes in economic growth, the focal point of which is that all factors of the economic operation must be subordinated to improving the external (dollar) equilibrium.

One of the decisive factors of the equilibrium problems is that in our foreign trade our exchange rates are deteriorating both in the dollar and ruble relationships. There are two reasons for this: on the one hand, being a country which is poor in natural resources and raw materials, a high ratio of our export is of material character from both directions, the price of which is increasing at a faster rate than that of the finished products; and on the other hand we are lagging behind the world standards in the profitability and production efficiency of the products we produce and export.

All these are valid at an increased extent for industry as the most important area of the national economy's production. In light of this our tasks can also be designated in two closely interrelated areas:

--structure change towards profitable and less material-demanding products,

--improving the efficiency of production.

In industry we have huge, today still uncovered reserves in these areas. The results we achieved or are expecting in 1979 -- though they are worthy of attention -- are still modest in comparison with our opportunities.

In order for industry to achieve the planned 4 percent production increase, it would have to produce on the average 5 percent more than a year earlier in the remaining time, which -- considering the data on the order inventory -- is not unachievable, thus the expected volume of industrial production can presumably approach the planned level. In comparison with the plan, the shortcomings are mainly in the light industry and food industry. Its reasons are: in the light industry sales difficulties due to quality and to increasing competition by the developing countries, in the food industry the less favorable than expected raw material basis due to the weaker agricultural results.

Industrial sales are expected to grow at a faster rate than production: the reason for this is that at the end of last year many enterprises cut back on their sales which then in turn manifested itself in the increase of year end inventories and the sales results being transferred to this year.

It is a result in line with our goals that the ratios within industrial sales have shifted in the direction of export, and even within that in the direction of dollar-related export. Since with respect to growth rate, in the part of the year which passed until now, domestic sales reached about five times the level of exports, and within this about ten times the level of the dollar-related export, it is probable that this tendency will also prevail for the entire year. Among industrial products sold in dollar relationships we sold the metallurgical products, numerous chemical industrial and furniture industry products at more favorable prices than last year, at the same time we exported the products of our machine industry at more moderate prices than last year.

Based on order inventory data and other information our capitalist export expectations appear to be favorable also for the remainder of 1979, but some of our enterprises will be able to maintain even the growth rate achieved in earlier years only if they export also some less profitable products.

Successful execution of the annual plan requires that the existing favorable trends in our economy be strengthened, and at the same time the effects of the ones qualified as unfavorable be strongly limited, or eliminated.

It can be valued as a favorable tendency that in the first half of 1979 the volume of investments did not reach the level of last year's first half, and the decrease -- in accordance with the plan's goals -- occurred at the investments made by the enterprises. It is expected that the socialist sector's investments will this year remain within the planned limits (perhaps even a small decrease can be imagined).

Steps have been taken in earlier years also, but more emphatically this year to moderate the increase of nonruble accounted import, but these have not yet produced significant results in all cases. In any case it can be established that results of the measures enacted are already appearing in our industry -- even if modestly so at this time -- in the areas of more frugal economic management of imported materials, decreasing the import needs of production, and of replacing the capitalist import (seeking the possibilities of domestic production of rechannelling it into socialist relations).

It is an unfavorable phenomenon that the payment discipline of the economic operating organs continued to deteriorate in comparison to the previous year. In the expired time portion of the year the number of those major enterprises was very significant which had become unable to make payments for a shorter or longer time, and were able to pay their debts only by taking on credit.

Among some of the growth tendencies affecting the national economy's development next year, I would like to call attention to the following ones.

The 1980 national economic plan does not project tendency changes similar to those for this year; the task that we must subordinate all factors of our economic operation to further improvement of the external equilibrium will remain in effect next year also. The structural change of production will be the decisive factor of improving the equilibrium in 1980 (and also in the following years).

Next year's growth opportunities of industrial production will be decisively determined by the expansion opportunities of the nonruble related export. It can be taken for quite certain that the unsatisfactory economic development of the capitalist countires, various disadvantageous discriminations will place even stricter conditions on the growth opportunities of our industrial export.

The effect exerted on the economic processes by modifying the regulatory system, and of the new producer price system can be realistically evaluated only after the passing of a certain amount of time. The facts indicate that the economic operating organizations will have to overcome numerous difficulties next year also. With the limitations on the domestic market and keeping the socialist export within the planned limits, in some cases capacity utilization problems may also occur, which may lead to further moderation of the growth of industrial production. Overcoming these difficulties places increased demands on the economic leadership people working on various levels of the directing mechanism.

The regulatory system's planned modifications are aimed at strengthening the elements of normative regulation, therefore the independence of the enterprises may prevail in an increased extent.

We must implement the requirement that the communities which work economically and profitably, and take initiatives, should enjoy greater advantages than the ones working with lesser results.

With the changed price system the value relationships express the national economy's interests and goals better than before, therefore the enterprises's interests, the realistically orienting and compelling effects of the value processes can be built on better also in the economic directive work, the extent of detailed, individual interventions into the economic activity can be decreased.

And we must mention another one of our important reserves, emphasizing its significance, even though it is mentioned at the end: the labor competition movement which even to this date has taken on nationwide dimensions in honor of the MSZMP's 12th congress and of the 35th anniversary of our country's liberation. It appears unambiguously from the competitive pledges of the socialist brigades and enterprise collectives that they are in harmony with our economic policy goals, with the requirements of the national economic plan. The decisive majority of the pledges serves to increase economical production and sales, the increases of profitability and work productivity, improvement of the moderness and quality of the products. Initiatives especially worthy of attention have been taken to increase frugality with materials, energy and imports. The competitive movement which has developed is on the one hand an affirmation of agreement with the party's policies, of the readiness to act in the service of our country's economic improvement, and on the other hand by fulfilling the pledges the workers will help in the successful implementation of the tasks specified in this year's as well as in next year's national economic plan, laying down better foundations for our Sixty Five-Year Plan.

8584
CSO: 2500

PRELIMINARY DATA ON 1979 ECONOMIC RESULTS EXAMINED

Budapest FIGYELO in Hungarian No 49, 5 Dec 79 p 3

[Article by Andras Nyilas: "Preliminary Report For This Year"]

[Text] The 1979 National Economic Plan subordinated the most important economic operating and financial processes to improving the foreign [trade] equilibrium situation. Studies and analyses thus far published are explaining the deterioration of the national economy's foreign equilibrium with the following reasons:

1. As a consequence of the world market's price explosion in 1973-1974 our foreign trade exchange rates deteriorated significantly. Simplifying the interrelationships, we can say that the entire import increase essentially is a foreign trade price loss. That is, if in recent years we had exported and imported at 1972 prices, our foreign trade balance would be in an equilibrium, indeed in some of the years we would have had a surplus.

2. The efficiency of our economic operation is low: the efficiency and production level of our production are low when measured with international standards. This derives primarily from the facts that until now, production and the export were unable to conform with the necessary flexibility to the changed world market demands.

3. Domestic consumption has grown far in excess of the domestic resources. In the last 5 years the national income each year had to be supplemented by an average of 6 percent external resources to increase consumption, investment and inventory accumulation.

The three reasons are inseparable from each other. None of them alone would have caused our negative external equilibrium. By themselves none of the factors could have triggered a foreign trade deficit of such proportions. Because, if for example the efficiency and flexibility of our economic operations would have been sufficient, these could have counterbalanced the losses resulting from the deterioration of the exchange rates and could have insured the level and growth of domestic consumption. Or, for example if we had significantly decreased domestic consumption, this would have made it unnecessary to take out foreign loans.

Decreasing Deficit

Hungary can finance the shortage which developed in the foreign trade of goods only from one possible source: from foreign credits. But the use of credit is becoming increasingly costly: the interests and the other costs (for example the exchange rate losses) represent increasing burdens for the users of credit.

The situation which had developed by 1978 forced the economic management to employ more forceful measures than before to improve the foreign economic equilibrium. It is true that the Fifth Five-Year Plan also made it one of its goals that domestic consumption should grow at a slower rate than the national income, so that the "savings" generated between the domestic production and consumption could be used to improve the foreign [trade] equilibrium. In contrast with this, during the last three years national income increased by 16 percent, domestic consumption by 18 percent. And instead of the expected improvement, our exchange rates also further deteriorated.

The 1979 National Economic Plan represented a change with respect to the previous years primarily as far as domestic consumption is concerned: it made it a goal that domestic consumption must be kept essentially at the same level in 1979 as it had been in the previous year, while the national income was to increase by 3 to 4 percent. According to the plan, this had to be achieved by a significant decrease the inventories, and popular consumption could increase only at a slower rate than in the previous year. It follows from this that the planned growth of the national income could in its entirety be spent on improving the foreign trade equilibrium.

It can be concluded from the results of the past 9 or 10 months of 1979 that we have essentially succeeded in achieving the national economic plan's basic goal--under much more difficult conditions than had been planned: in 1979 the deficit of the nonruble-accounted foreign trade is expected to be almost half of what it was in 1978. In the first three quarters of 1979 the nonruble-accounted exports increased by 25.5 percent, while imports decreased by 2.4 percent. Viewing the year as a whole, we can expect some moderation of export growth thus far, and also that imports this year will be approximately at the same as last year's. All these support the expectation that our nonruble accounted deficit will be significantly less than it was in 1978, in accordance with the plans.

Growth and Equilibrium

It is not expected that we will be able to achieve the projected 3 to 4 percent growth of the national income, which is due for the most part to the loss of production in agriculture because of the unfavorable weather, and to the fact that the growth of industrial production will also be more moderate than had been projected. (The national economic plan projects 4 percent growth of the industrial production.)

At first glance, it appears from the improvement of the equilibrium and from the moderation of the economic growth as if a decrease of the economic growth were one of the preconditions of the equilibrium's improvement. This statement would be true only if production decreased in those branches, or if the increase of production were moderated where the production requires relatively high levels of import. Based on the data available thus far, it would be difficult to give an accurate answer to this now, but this much is certain that the growth of chemical industry production, which is known to require high levels of nonruble-accounted import, has decreased from 11 percent in 1978 to 3 percent in the first three quarters of 1979. Many branches of light industry have also produced less in the first 9 months of the year than they did a year ago.

It Depends On Profitability

But the answer given to the dilemma between growth or equilibrium is still "lopsided," because it deals with only one of the conditions of equilibrium: the import needs of economic growth. Obviously from the viewpoint of equilibrium it is also at least this important to increase the export.

Over the shorter range (for example in 1979) the primary path of both moderating imports and increasing exports, that is, of improving the foreign trade balance, was--as we have already noted--to limit domestic consumption. This year expectedly the population's consumption and the volume of investments will remain essentially at the last year's level, or will exceed it by only 1 or 2 percent. However, the accumulation of inventories is decreasing significantly to just about half of the 45 billion forint growth value of 1978. In 1979 total domestic consumption will be about 4 percent, about 20 billion forints less than a year earlier. Such an extent of decrease in domestic consumption results almost exclusively from the fact that this year the extent of inventory accumulation will be cut in half. This way in terms of volume a "savings" of about 5 percent can be expected between the ways production and domestic consumption develop, which can serve the ends of improving the foreign trade equilibrium. Thus by this we have significantly overfulfilled the projection of the national economic plan according to which 3 to 4 percent "savings" must be achieved in 1979 between the national income and the volume of domestic consumption.

Weighing the possibilities of how the economic growth may develop over the longer range, is it not clear-cut that the most favorable method of improving the economic equilibrium is the low rate of domestic consumption and with this the low rate of the economy's growth?

Of course, certain forced steps are also being taken temporarily to improve the economic equilibrium, but the ultimate, long range solution is only the dynamic development of economical export and in general economical production, measured with international standards.

Price Losses and Its Effects

One of the unfavorable circumstances of the 1979 economic developments is the greater than expected deterioration of the exchange rates, more precisely also the larger (much larger) price losses than planned. Foreign trade price losses are composed of two factors. One of the factors is the increase of price levels which causes greater losses when--as now in our country--there is a significant balance deficit and export and import prices alike are increasing significantly. Let us assume that import is 100, export is 50 and therefore the deficit is 50 units. If both export and import price levels are increased by for example 10 percent, then simply by the 10 percent increase in the foreign trade price levels, the deficit increases by 5 units (import 110 - export 55 = 55 deficit). The other factor is the loss deriving from the deterioration of exchange rates. For example if the exchange rates are also deteriorating--let us say by 5 percent (for example import prices increase by 15 percent and the export prices by 10 percent), in our example this will cause an additional loss of 5 units. Thus the total price loss is 5 + 5 = 10 units.

In 1979 we can expect to suffer an additional price loss of about 2 billion forints due to the approximately 4 percent rise in foreign trade prices, and about 5 to 6 billion forints due to the approximately 3 percent deterioration of the exchange rates, giving a total of about 7 to 8 billion forints, which is more than had been expected. There appear to be two possibilities to finance the price losses: one is to finance it from domestic resources, that is, from the national income; the other one is to use foreign credits. This latter was also used in 1979. But the answer to the question of how much the actual national economy's usable income was in 1979, on an international scale, is provided by the fact that we have to subtract price losses from the produced national income. And the national income corrected with the price loss deriving from the international price changes was less in 1979 than a year earlier. (That is, about 1 percent growth in the volume of the national income can be estimated at about 5 to 6 million forints,in contrast with which there was a foreign trade price loss of about 7 to 8 billion forints.)

We must recognize the fact of the price loss. Prices of raw mineral and of the energy sources, as well as their secondary products continue to increase faster on the world market than the prices of the processing industries. It appears that this is an economic law with which we will have to live for many years. (See Leontiev's UN study entitled "The World Economy's Future.") These type of changes of the price ratios are also reflected in the price developments of our 1979 export. Moreover, the prices of our material exports increased even faster in the nonruble-accounting relationships than have the prices of imported materials. (In the first three quarters of 1979 the price index of materials exported for dollars increased by 16.8, of the imported materials by a lesser extent than this, by 13.3 percent). Thus in our nonruble trade, exchange rates deteriorated exclusively because until now the price index of industrial products (machinery and industrial consumer items) stagnated but the import price levels of these same items increased by 4 percent. Essentially this means that the Hungarian processing industry was not able to keep up with the world market price trends this year either. But it is also true that we were able to take advantage of the business cycle of metallurigcal materials. That is, the majority of dollar export increases thus far was made up by increasing the exports of material products. These facts repeatedly warn us about the weak sides of our industrial production and of our export, namely that the Hungarian processing industry finds it difficult to hold its place on the world market with its present products in the ever escalating competition.

Modernization of the Structure

This year's sharp growth in the nonruble-related exports, import stagnation and as a result the significant decrease of last year's foreign trade deficit in themselves can be considered very significant results. The fact that with a 10 percent lower import volume, we were able to export 16 percent more goods in the first nine months of the year is a result worthy of recognition, particularly if we consider that in the last 8 years, between 1971 and 1978 the annual volumes of dollar exports and imports increased by an average of 6 to 8 percent.

It also can be considered to be a turning pointing that for the first time in many years the volume of investments remained essentially within the planned limits, and indeed it can even be expected that it will be somewhat lower than last year's level. Compared to 1978, it can be called a shift in trends that this year the growth of inventories will be significantly more moderate. In contrast with the 3 to 4 percent increases of previous years, this year real incomes and real wages will achieve last year's levels. More precisely with the known conditions, it can be considered an achievement if we succeed in stabilize the already achieved standards of living.

Under our circumstances there are two main tools for reestablishing the foreign trade balance: 1. limiting the growth of domestic consumption, 2. vigorous remodeling of the structure of production and foreign trade. We have seen that beginning with 1979 to reestablish the equilibrium we are strictly limiting the growth of domestic consumption. But it can be expected and hoped that the changes which are beginning to take place in the production structure will strongly accelerate in 1980 because the enterprises will have a good, or at least a better "compass" than before for judging the economical production and export.

8584
CSO: 2500

HUNGARY

VALUE OF HOUSING STOCK EXAMINED

Budapest STATISZTIKAI SZEMLE in Hungarian No 11, Nov 79 pp 1082-1089

[Article by Peter Mihalyi: "On the Value of Our Housing Stock"[1]]

[Text] According to KSH Central Statistical Office] statistics on our national wealth[2], the ratio of the value of our housing stock as compared to our national wealth as a whole is declining. There is a similar trend in the other socialist countries. Between 1965 and 1975 the ratio of the housing stock as compared to the gross value of fixed asset stocks declined the most (by 10.2 percentage points) in Bulgaria of all the socialist countries; there was a lesser decline in Poland and Hungary (6.7 and 6.2 percentage points respectively), and the least of all 2 percentage points) in the CSSR.[3]

These data reflect interesting facts--at least in reference to Hungary--that are difficult to believe. This is so not only because in the past decade and a half there has been a change in the pace of housing construction but also because, as is well known, the housing question is an economic problem of political importance.

In the view of public opinion, the prices of new houses and apartments and houses which are on sale are rising at a rate far exceeding the price level. As a result we should expect that the ratio of housing in national wealth would increase and not decrease.

Various people have already drawn attention in the economic literature to the inadequate and in some areas the deteriorating supply of means in the housing sphere, and in general in the infrastructural branches, and with logical and historical explanations they have furnished and even outlined the possible (Source 12) lines of solving the tensions which have accumulated in wake of the serious historical "deferral."[4] It is in no way the goal of this essay to dispute these works. It is my conviction that those conclusions which have been suggested in these writings are correct. However, I believe that we can only increase the credibility of the reasoning if we subject to critical analysis the data that have been used as means of proof--even if we do so in only a few selected areas.

Our goal is threefold:

1. We would like to support with reasons our opinion that our statistics on national wealth--as compared to other entries--tendentiously underestimate the value of the housing stock;[5]

2. We have tried to put together a time series consistent with the balance system of the national economy which, in our opinion, will reflect the actual value of the housing stock in accordance with a more consistent application of wealth calculation principles;

3. On basis of the time series for estimating the housing stock, we are making up several additional time series which are essential from the viewpoint of macroeconomic interrelationships of housing management.

In the calculation system of the KSH, the various elements of national wealth are given at reacquisition prices valid at the time of observation, how much it would cost to rehabilitate or reacquire.[6] It is well known that a consistent application of this principle causes problems especially in the case of buildings, because their life span can extend from 75 to 100 years. This difficulty can be solved only if buildings--and longlast-inggoods in general--are periodically revaluated. This is the way a situation can arise where, between two repricings, various entries under national wealth can be accounted for actually at mixed price-level, so-called recorded, value.

We shall see, however, that the undervaluation of the housing stock does not stem from this--in any event temporary--distortion. The periodical repricings (the most recent in 1976) reduce the size of this error but do not eliminate it.

We can obtain the average value of a house if we divide the capital value in the statistics on national wealth by the units of houses. Accordingly, in 1960 the value of one house was about 100,000 forints. But by 1977 it came to almost 180,000 forints (see Table 1).

We have stated that we regard these values a unrealistically low, and therefore the question is justified: Low in comparison to what? If we cling to the general procedural principles of our wealth statistics, we must compare them to the market prices. But then we are confronted with the difficulty that a part of the housing stock does not enter into regular trade and thus we do not have well-documented, representative market price statistics on this important entry under national wealth.[7] Sale of family houses which make up the greater part of the housing stock are hardly limited by legal restrictions (as opposed to state-rented houses) and still this trade is rather irregular. Our information--or rather only sporadic news--comes to us for the most part only regarding a narrow area of housing stock: we know approximately what a state, cooperative or privately owned residence costs, and we know the market prices of houses that were built in the past 5-10 years and are easily marketable.[8] It would be an error, however, to arrive at the value of the national housing stock from these prices.

The following solution appears obvious and very simple, but from the viewpoint of macroeconomic balance interrelationships it is adequately exact and clear in principle: we continously correct the value of the housing stock in accordance with prevailing, average housing construction costs. This fully corresponds with the principle of accounting according to reacquisition value, and in principle it can be easily carried out.

Dividing the total sum devoted to housing construction by the number of houses built, we obtain the average construction cost of a newly built house. If we calculate in this way, the specific construction cost in 1960 was 140,000 forints and in 1976, on the other hand, 310,000 forints (see Table 2).

We obtain the value of the housing stock by multiplying the number of houses with the average construction costs of the previous year (see Table 3). This method is actually related to the so-called border cost formula used in price formation practice when converting import prices that appear in foreign exchange, the great advantage of which is that it takes into account the fact it is possible to meet the growing demands only from a more expensive acquisition source (Source 5).

If we analyze the problems of housing management at the macrolevel, this is also the outlook that must be realized in our data. For the replacement of obsolescent, poorer quality houses comes in reality from a more expensive source. Naturally, we are not maintaining herewith that we are speaking only of the price level or cost rise, casting doubt on the fact that the technical level of the houses now being built significantly exceeds not only that of the stock that is being eliminated but even of the average level. This is obviously how it is. We must, however, draw attention to the fact that at the macrolevel the specific construction cost depends primarily on how the ratio of houses (family houses) of home-made construction is developing in housing construction within a given year. From the viewpoint of the capital demand of construction, it makes a big difference whether the house is produced by an organized construction industry or a family unit using various sources (including in part the organized construction industry as well). The decline in the ratio of private construction (and the slow growth of its volume) is a fact, however. From our point of view, the principle of a more expensive acquisition source means that in the given housing management relations there is hope for partly satisfying the existing demand only if we increase the construction of the more expensive houses built in an organized way.

We must see, however, that this process of thought actually particularizes an economic situation that is laden with tensions. Given the fact that it continuously corrects the value of the existing stock with the changes in the current construction costs, our method recognizes also as a socially necessary expenditure the reproduction of goods whose costs derive mostly from the fact we would above all like to solve our urban housing shortage by building more and more houses faster in conformance with the possibilities afforded by housing management and the construction industry structure. Thus our method overevaluates those houses which were built several decades ago and which were still not built under circumstances that developed in response to pressing economic compulsions and were erected relatively inexpensively.

In any event, it is interesting that as recorded by the KSH, the average house value at the very beginning of the 1960's was still close to actual building costs (1:1.3), but later the gap widened (1:1.8).

If it is with a housing stock value calculated in this way that we correct the data given by the KSH for the value of reproducible national wealth and if we again examine how the value ratio of our housing stock developed, then we learn that it is still declining, but the speed of the process is much slower than shown by the KSH data.

But we shall not do this now for two reasons: On one hand, because the calculation requirement of this task is very great, and on the other hand I do not believe that even a time series made at the cost of such great labor would create in housing management the conditions for macroeconomic clarity of vision.

As shown by our economic balance system--and the SNA [System of National Accounts]--there would be compatibility if the performance of housing service were evaluated at the level of housing rents, Source 2, p 113. This would not represent a change in theory since the KSH's present accounting system also takes into account the personal consumption of the population in such a way that it measures actual demand satisfaction, independently of who finances the consumed goods and the services used, Source 2, p 140.

But it is not clear at what house-rent level we should evaluate the current performance value of housing service, for most of the households do not pay rent at all, some are unrealistically low, and a small percentage on the other hand obtains housing or a part of a house for disproportionately high rent. The selection of the level, therefore, is inevitably arbitrary--and as such it is naturally disputable--something which we can counter only if we employ various kinds of hypothetical calculations.

Let us start from an approach accepted in international construction industry practice that in the life span of a building it is necessary to expend a sum corresponding approximately to the building costs. This means that--calculated at unchanged prices--the maintenance, repair, modernization and renovation costs come to as much as the original construction cost. It is well known that in Hungary the condition of the building stock is not adequate, the volume of house improvement works has for decades not met the usual technical norms. For this reason, in calculating the costs related to the building and maintenance of the housing stock, we shall reckon with one and one-half times, not double, the building cost.

Moreover, we shall assume that the one-time investment cost related to the construction of the house and the total current expenditure incurred during use will be recovered in 15 years.[11] There is no profit, or it begins only with the 16th year when there are no longer any current expenditures and capital value has been totally amortized.

These two assumptions together make the calculation much easier: one-fifteenth of one-half of the value of the housing stock calculated on basis of the border cost formula gives the gross performance value calculated on the fictive rent level of the housing service, an it derives from this that the prevailing performance value is 10 percent of the prevailing capital value.

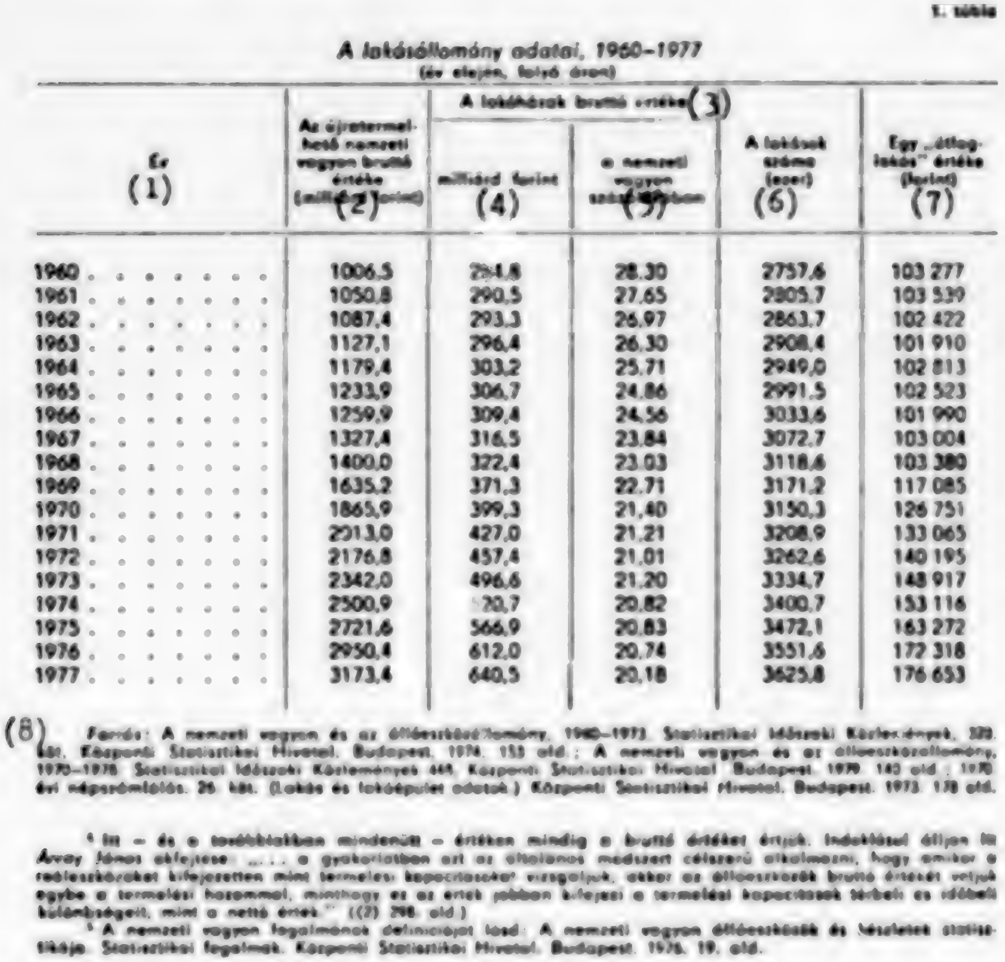
Correcting the population's consumption values by this calculated performance value of the housing service, we received the result that at the fictive rent level the ratio of housing service in the consumption of the population as a whole is 24-25 percent, which corresponds to the ratios that may be obtained in international comparisons (see Table 4).

Following the revaluation of the housing wealth, we can be less satisfied with the change which has occurred in the first 15 years of the housing construction plan. We are not only speaking of the fact that the demands have also increased in this period. We must also think of the fact, however, that during this time the accumulated economy of the society also increased, and therefore--in principle--the possibilities also increased. But because the KSH undervalues the existing stock, the economic efforts made at increasing the housing stock appear greater than they actually are.

According to KSH data[12], the value of the housing stock in 1962 increased by 2.67 percent (this is the amount expended on housing construction), but 4.80 percent by 1976. According to our own estimates though the growth in the value of the housing stock came to 2.10 percent in 1962 and 3.13 percent in 1976.

Thus according to the KSH statistics, the intensity of construction grew by more than 80 percent. However, if we take into account the value of the stock actually in accordance with the reproduction costs, the growth in the intensity of housing construction was less than 50 percent, that is, considerably less than shown by the KSH data.

Table 1. Data on the Housing Stock, 1960-1977 (at year's beginning, at current prices)



1. tábla

A lakásállomány adatai, 1960–1977

(év elején, folyó áron)

Év (1)	Az újratermelhető nemzeti vagyon bruttó értéke (milliárd forint) (2)	A lakóházak bruttó értéke (3)		A lakások száma (ezer) (6)	Egy „átlag-lakás" értéke (forint) (7)
		milliárd forint (4)	a nemzeti vagyon százalékában (5)		
1960	1006,5	284,8	28,30	2757,6	103 277
1961	1050,8	290,5	27,65	2805,7	103 539
1962	1087,4	293,3	26,97	2863,7	102 422
1963	1127,1	296,4	26,30	2908,4	101 910
1964	1179,4	303,2	25,71	2949,0	102 813
1965	1233,9	306,7	24,86	2991,5	102 523
1966	1259,9	309,4	24,56	3033,6	101 990
1967	1327,4	316,5	23,84	3072,7	103 004
1968	1400,0	322,4	23,03	3118,6	103 380
1969	1635,2	371,3	22,71	3171,2	117 085
1970	1865,9	399,3	21,40	3150,3	126 751
1971	2013,0	427,0	21,21	3208,9	133 065
1972	2176,8	457,4	21,01	3262,6	140 195
1973	2342,0	496,6	21,20	3334,7	148 917
1974	2500,9	[illegible]20,7	20,82	3400,7	153 116
1975	2721,6	566,9	20,83	3472,1	163 272
1976	2950,4	612,0	20,74	3551,6	172 318
1977	3173,4	640,5	20,18	3625,8	176 653

(8) *Forrás:* A nemzeti vagyon és az állóeszközállomány, 1960–1973. Statisztikai Időszaki Közlemények, 320. köt. Központi Statisztikai Hivatal. Budapest, 1974. 153 old.; A nemzeti vagyon és az állóeszközállomány, 1970–1978. Statisztikai Időszaki Közlemények 448. Központi Statisztikai Hivatal. Budapest. 1979. 140 old.; 1970. évi népszámlálás. 26. köt. (Lakás és lakóépület adatok.) Központi Statisztikai Hivatal. Budapest. 1973. 178 old.

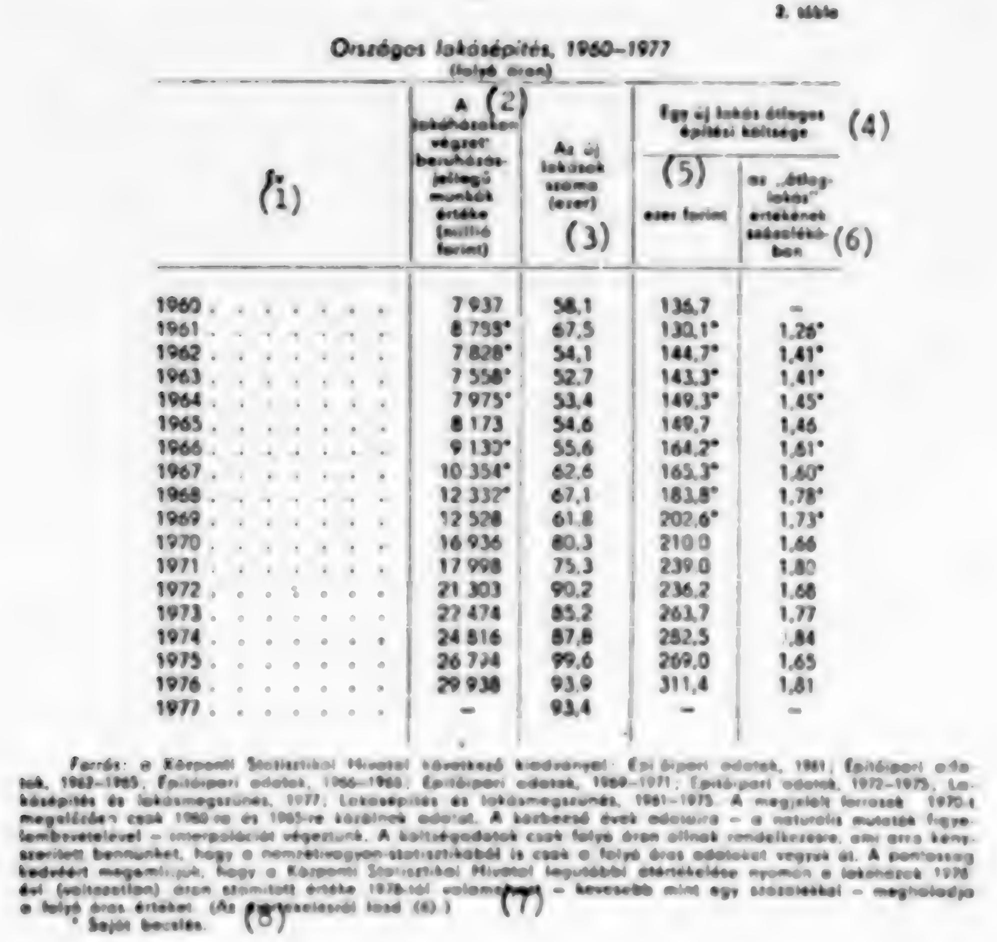
[1] Itt – és a továbbiakban mindenütt – értéken mindig a bruttó értéket értjük. Indoklásul álljon itt Árvay János okfejtése: „... a gyakorlatban azt az általános módszert célszerű alkalmazni, hogy amikor a állóeszközöket kifejezetten mint termelési kapacitásokat vizsgáljuk, akkor az állóeszközök bruttó értékét vetjük egybe a termelési hozammal, minthogy ez az érték jobban kifejezi a termelési kapacitások térbeli és időbeli különbségeit, mint a nettó érték." ((2) 298. old.)

[2] A nemzeti vagyon fogalmának definícióját lásd: A nemzeti vagyon állóeszközök és készletek statisztikája. Statisztikai fogalmak. Központi Statisztikai Hivatal. Budapest. 1976. 19. old.

Key:

1. Year
2. Gross value of reproducible
3. Gross value of reproducible national wealth (in billion forints)
4. In billion forints
5. In percentage of the national wealth
6. Number of houses (in thousands)
7. Value of an "average house" (in forints)
8. Source: "The National Wealth and The Stock of Fixed Assets, 1960-1973," PERIODICAL STATISTICAL ANNOUNCEMENTS, 320, KSH, Budapest, 1974, 153 p.; "The National Wealth and the Stock of Fixed Assets, 1970-1978," PERIODICAL STATISTICAL ANNOUNCEMENTS, 448, KSH, Budapest, 1979, 140 p.; 1970 National Census, Vo. 26 (House and residence data) KSH, Budapest, 1973, 178 p.

Table 2. National Housing Construction, 1960-1977 (at current prices)



2. tábla

Országos lakásépítés, 1960–1977
(folyó áron)

(1)	A lakóházakon végzett beruházás-jellegű munkák értéke (millió forint) (2)	Az új lakások száma (ezer) (3)	Egy új lakás átlagos építési költsége (4)	
			ezer forint (5)	az „átlag-lakás" értékének százalékában (6)
1960	7 937	58,1	136,7	–
1961	8 755*	67,5	130,1*	1,26*
1962	7 828*	54,1	144,7*	1,41*
1963	7 558*	52,7	143,3*	1,41*
1964	7 975*	53,4	149,3*	1,45*
1965	8 173	54,6	149,7	1,46
1966	9 133*	55,6	164,2*	1,61*
1967	10 354*	62,6	165,3*	1,60*
1968	12 332*	67,1	183,8*	1,78*
1969	12 528	61,8	202,6*	1,73*
1970	16 936	80,3	210,0	1,66
1971	17 998	75,3	239,0	1,80
1972	21 303	90,2	236,2	1,68
1973	22 474	85,2	263,7	1,77
1974	24 816	87,8	282,5	1,84
1975	26 734	99,6	269,0	1,65
1976	29 938	93,9	311,4	1,81
1977	–	93,4	–	–

* Saját becslés.

(Key on next page)

Table 2. National Housing Construction, 1960-1977
(at current prices)

Key:

1. Year
2. Value of investment-type jobs on housing (in million forints)
3. Number of new houses (in thousands)
4. Average building cost of a new house
5. Thousand forints
6. In percentage of the value of an "averaged house"
7. Source: The following publications of the KSH--"Construction Industry Data, 1961"; "Construction Industry Data, 1962-1965"; "Construction Industry Data, 1972-1975"; "Housing Construction and Housing Elimination, 1977." For the years prior to 1970, the indicated sources provide data only for 1960 and 1965. We have interpolated data for theintermediary years, taking into account the natural indexes. The cost data are available only at current prices which has constrained us to take current price data only from the statistics on national wealth. For the sake of accuracy, let us note that in wake of the most recent revaluation by the KSH the value of houses calculated at 1976 (unchanged) prices exceeds somewhat--by less than 1 percent--the current price value. Regarding the revaluation, see Source 6.
8. Own estimate

Table 3. Estimated Value of the Housing Stock, 1960–1977
(at the beginning of the year, at current prices)

3. tábla

A lakásvagyon számított értéke, 1960–1977
(év elején, folyó áron)

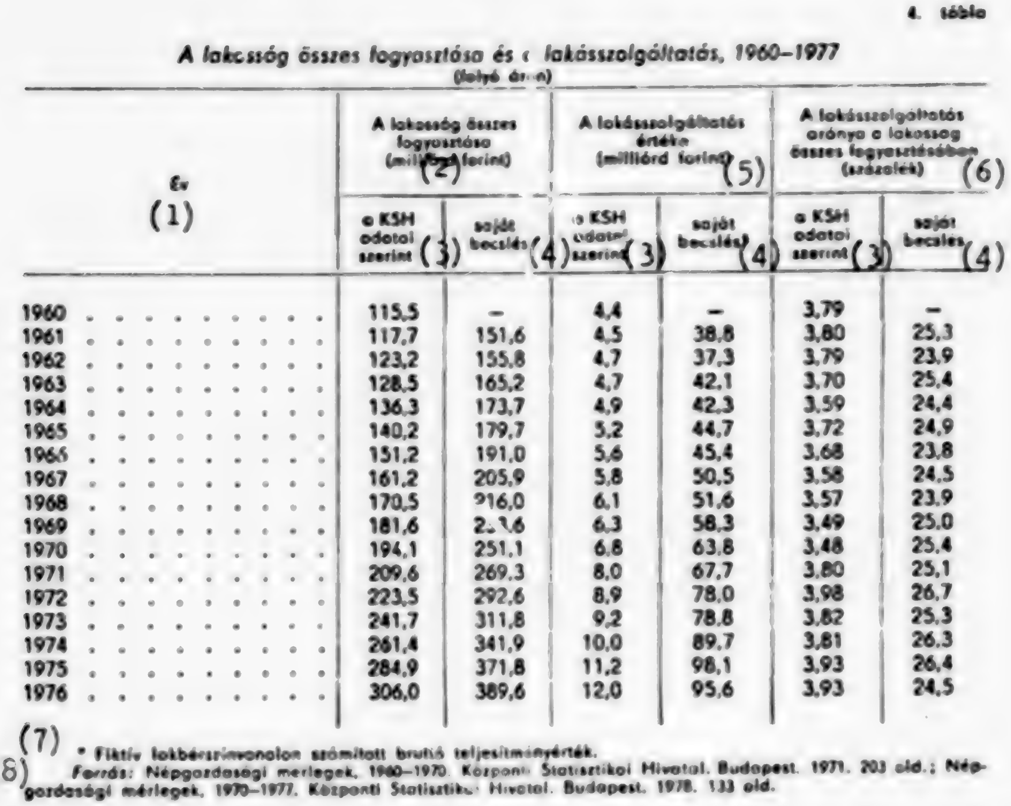
Év (1)	Az újratermelhető nemzeti vagyon korrigált bruttó értéke (milliárd forint) (2)	A lakásállomány (3)	
		számított bruttó értéke (milliárd forint) (4)	értéke a nemzeti vagyon százalékában (5)
1960	–	–	–
1961	1143,9	383,6	33,53
1962	1166,8	372,7	31,94
1963	1251,5	420,8	33,62
1964	1298,9	422,7	32,54
1965	1379,9	446,7	32,37
1966	1404,6	454,1	32,33
1967	1515,5	504,6	33,30
1968	1593,1	515,8	32,36
1969	1846,9	583,0	31,57
1970	2104,8	638,2	30,32
1971	2263,0	677,0	29,92
1972	2499,2	779,8	31,20
1973	2633,0	787,6	29,91
1974	2877,1	896,9	31,17
1975	3135,6	980,9	31,18
1976	3294,0	955,6	29,01
1977	3661,7	1128,9	30,83

Key:

1. Year
2. Corrected gross value of national wealth (in billion forints)
3. The housing stock
4. Estimated gross value (in billion forints)
5. Value in percentage of national wealth

Precisely because of the consistency in the balance system, the undervaluation of the housing stock in the statistics for national wealth conveys a distortion into the current balance as well. It is well known, for example, that in calculating the gross performance value of housing service--both in case of the private and the state-owned houses--the value devaluation for the subject period also plays a role among the entries totalled.[9] Obviously, if we recalculate the capital value, this will also influence the amortization. In principle there would be no obstacle--and from the viewpoint of the particularization of the macroeconomic interrelationships, it would be very important--to our recalculating the major tables of the current balances with this modified capital value (for example, the national income, GDP [Gross Domestic Production] as well.

Table 4. The Population's Total Consumption and Housing Service, 1960–1977 (at current prices)



4. tábla

A lakosság összes fogyasztása és a lakásszolgáltatás, 1960–1977
(folyó áron)

Év (1)	A lakosság összes fogyasztása (milliárd forint) (2)		A lakásszolgáltatás értéke (milliárd forint) (5)		A lakásszolgáltatás aránya a lakosság összes fogyasztásában (százalék) (6)	
	a KSH adatai szerint (3)	saját becslés (4)	a KSH adatai szerint (3)	saját becslés* (4)	a KSH adatai szerint (3)	saját becslés (4)
1960	115,5	–	4,4	–	3,79	–
1961	117,7	151,6	4,5	38,8	3,80	25,3
1962	123,2	155,8	4,7	37,3	3,79	23,9
1963	128,5	165,2	4,7	42,1	3,70	25,4
1964	136,3	173,7	4,9	42,3	3,59	24,4
1965	140,2	179,7	5,2	44,7	3,72	24,9
1966	151,2	191,0	5,6	45,4	3,68	23,8
1967	161,2	205,9	5,8	50,5	3,58	24,5
1968	170,5	216,0	6,1	51,6	3,57	23,9
1969	181,6	[illegible]	6,3	58,3	3,49	25,0
1970	194,1	251,1	6,8	63,8	3,48	25,4
1971	209,6	269,3	8,0	67,7	3,80	25,1
1972	223,5	292,6	8,9	78,0	3,98	26,7
1973	241,7	311,8	9,2	78,8	3,82	25,3
1974	261,4	341,9	10,0	89,7	3,81	26,3
1975	284,9	371,8	11,2	98,1	3,93	26,4
1976	306,0	389,6	12,0	95,6	3,93	24,5

(7) * Fiktív lakbérszínvonalon számított bruttó teljesítményérték.

(8) *Forrás:* Népgazdasági mérlegek, 1960–1970. Központi Statisztikai Hivatal. Budapest. 1971. 203 old.; Népgazdasági mérlegek, 1970–1977. Központi Statisztikai Hivatal. Budapest. 1978. 133 old.

Key:

1. Year
2. Population's total consumption (in billion forints)
3. According to KSH data
4. Own estimates
5. Value of housing service (in billion forints)
6. Ratic of housing service in total consumption of the population (in percent)
7. Gross performance value calculated at a fictive rent level
8. Source: "Economic Balances, 1960–1970," KSH, Budapest 1971, 203 p; "Economic Balances, 1970–1977," KSH, Budapest, 1978, 133 p.

But in the following we shall expound one calculation result, although we shall not exclude the possibility of calculating on the basis of other assumptions as well[10]--because the estimate is surprisingly good, and gave us a result coinciding with our information from other relationships.

FOOTNOTES

1. For the writing of this study I received a great deal of help from Andras Brody, coworker in the Economics Institute of the MTA [Hungarian Academy of Sciences], and from Arpad Darabont of the KSH. I herewith express my gratitude to both.

2. "National Wealth and the Stock of Fixed Assets, 1960-1973," PERIODICAL STATISTICAL ANNOUNCEMENTS, 320, KSH, Budapest, 1974, 153 p.; "National Wealth and the Stock of Fixed Assets, 1970-1978," KSH, Budapest, 1979, 140 p.

3. "Economic Survey of Europe in 1976," II UN New York, 1977, 134 p.

4. As far as I know, Andras Brody was the first to write of this. He put it this way: "...In Hungary the rate of development in housing management, personal transportation, personal services, and even in education and health, is constantly and significantly lagging behind development in other areas of the economy. This lag is still exerting an effect toward decelerating the overall rate of development, although we are planning this lag in the interest of accelerating the growth rate by concentrating savings one-sidely on the development of industry and on the so-called 'productive' branches." Source 3, p 286; in the ample literature, see also: Sources 1, 4, 6, 8, 9, and 11.

5. Here and everywhere in the following, value means gross value. As justification, we present here the reasoning of Janos Arvay: "...in practice it is advisable to use the general method that in examining real means expressly as production capacities, we compare the gross value of the fixed assets with the production yield because this value better expresses the spatial and temporal differences of the values than net value." Source 2, p 298.

6. For the definition of the concept of national wealth, see: "The Statistics for Fixed Assets and Inventories in National Wealth," KSH, Budapest, 1976, p 19.

7. This is also the situation with the overwhelming bulk of the natural resources (for example, mineral resources and agricultural land areas), compare Sourc 2, p 268.

8. The housing costs rumored by the public--and frequently regarded as scandalous--are misleading if for no other reason than that they always include the value of the lot as well. On the other hand, in

housing stock evaluation the wealth statistics take note only of the value of the building and take account of the value of the lot with the land base.

9. The KSH at present interprets the gross performance value of state-rented houses as the sum of the housing rents and the value depreciation in the subject period. In the case of privately owned houses, current maintenance and improvement costs and the value of the house tax is taken into account in addition to amortization, Source 2, p 114.

10. See, for example, Source 7.

11. Naturally, this is also an arbitrary assumption but not without precedent. Frigyes Fellner (Source 10) in estimating the value of housing--on basis of the debt regulations in force then--also started out from the viewpoint that the owner recovered the house wealth in 11-16 years.

12. With our own method of making estimates, we cannot produce data for 1960. But 1961 is not an appropriate basis of comparison because in that year--due to the change in the accounting method for the housing stock--the net housing increase was outstandingly high.

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EFFICIENCY OF TRANSPORT FACILITIES EXAMINED

Budapest FIGYELO in Hungarian No 49, 5 Dec 79 pp 1, 2

[Article by Dr Rezso Bajusz: "Billions That Can Be Saved"--Efficiency in Transportation.]

[Text] Figure I

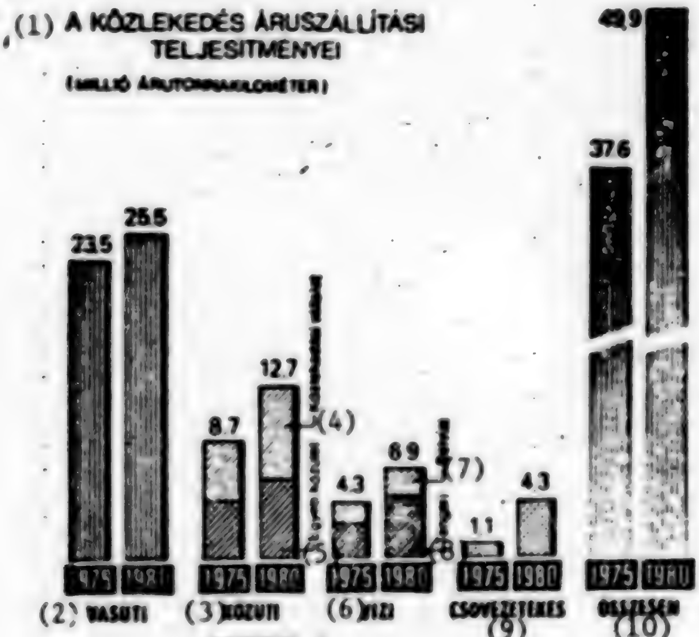

FIGURE I

Key:

1. Transportation's Freight Hauling Performances (in million freight ton kilometers)
2. railroad
3. public highway
4. transport enterprises
5. other public entities
6. waterways
7. internal waterways
8. seas
9. pipelines
10. total

Figure 2.

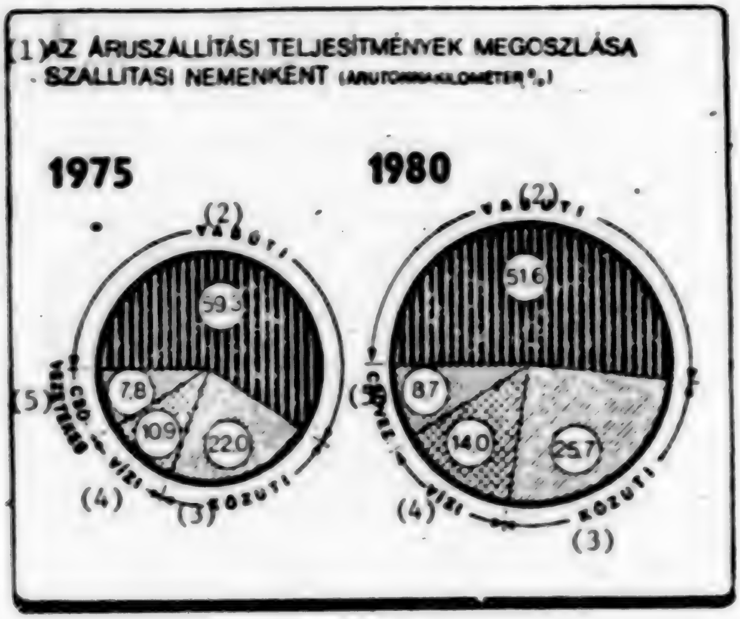

FIGURE 2

Key:

1. Distribution of Freight Hauling Performances By Type of Transportation (percentage of freight ton kilometers)
2. railroad
3. public highway
4. waterway
5. pipeline

[Text] Quantitatively the Hungarian transportation system (public, nonpublic and personal transportation) fulfills the dynamically growing needs of passenger transportation. The quantitative growth shows that the 74.6 billion passenger kilometer performance of 1975 is expected to increase to 102 billion by 1980. The passenger kilometer performance per person will reach 9,500 kilometers in 1980, significantly exceeding the European average.

Even though the quality of mass transportation services (safety, frequency, choice, comfort, etc.) is gradually improving, in some sub-branches of transportation, in some areas and times there are significant deviations from the average.

Meeting the improving quality of passenger transportation needs at unchanged tariff levels represents an important contribution to achieving the goals of the standards-of-living policy, cultural, educational, etc. goals. (In 1980 the passenger transportation price subsidy will reach 15 billion forints.)

Insufficient Equipment Park

Quantitatively the Hungarian transportation system is generally able to meet the freight transport needs. However, as a result of the combined effects of various factors, at times there are difficulties in freight transportation by rail, which also affects the work of the other transportation subbranches. Transportation's freight transport performance is expected to increase by 1980 to 49.4 billion freight ton kilometers, that is, by 24.7 percent from the 39.6 billion freight ton kilometers of 1975.

The rate of growth and the way the freight transportation performances per unit of the national income have developed, show that the measures taken thus far in our country for frugality in the freight transport activity are insufficient, even though the equipment, manpower and energy requirements of transportation are known to be high.

The quality of freight transport is not improving at the extent desired. Thus for example the ratio of freight transported with modern equipment and modern methods (palletized, containerized, unit shipments, etc.) is low. The results are only beginnings in coordinating the production, distribution, consumption and transportation processes, and as a consequence of this the efficiencies of the partial developments are very low.

In spite of all these things the Hungarian transportation system essentially satisfies the freight transport needs deriving from the economic growth and from the increase of international freight traffic. But at the same time, starting out from the national economy's condition and from the requirements, the improvements in the efficiency of freight transportation on the level of the national economy and partially on the level of the enterprises can today no longer be considered sufficient.

The following two time sequences illustrate the changes in transportation's economic efficiency:

Change in the Net National Product (GDP) Per Employee (at 1976 prices)
1975 = 100

	1976	1977	1978	1979 (plan)
Transportation	104.4	105.2	106.5	104.3
Material branches, total	104.2	109.0	104.3	103.9

Change in the Net National Product (GDP) Per Unit of the Equipment Park
(at 1976 prices) 1975 = 100

	1976	1977	1978	1979 (plan)
Transportation	98.8	102.1	103.5	101.4
Material branches, total	96.5	101.7	98.0	97.8

Though the effectiveness of live work in transportation is improving at an acceptable rate, this naturally does not mean that we have no reserves in increasing the organization of work. But we cannot judge the improvement of equipment efficiency to be unambiguously positive. That is, while equipment park of the material branches increased by 66.9 percent between 1970 and 1978, transportation's equipment park increased by only 43 percent--without the pipelines which in the meanwhile were reclassified, which distorts the comparison.

If we add to this that during the same time period the gross production value of transportation at current prices (without the pipelines) increased by 94.6 percent and the equipment park depreciated to zero grew from 4 billion to 14 billion forints, it can be sensed better that the development of transportation's equipment park has fallen short of the requirements. It also indicates this that the net-to-gross value ratio of the transportation equipment amounted to 59 percent in 1978, against 69.8 percent in the material branches. Within this, it was only 53 percent for the railroads.

The change in the distribution of work among the transportation branches is one of the expressions of the efficiency of transportation work. To wit, it is a known fact that the basic principle for distributing the transportation work is that each specialized transportation branch should fulfill that task which--taking the demands into consideration--it can perform at the appropriate level of quality with the least possible investment of live and embodied labors. Naturally in the course of this consideration must also be given to the controlling volumes, transportation distances, characteristics of the freight, differences between the reasons for travel, extent of the development of transportation technology, the narrowness of the influencing system affecting the improvement of work distribution, etc.

Taking into consideration the things mentioned above, it can be established that in transportation the distribution of work has developed essentially in the direction appropriate for the goals of the transportation policy, and its standards are also in accordance with the country's general development.

The following has to be added to the columns of data which show how the distribution of transportation's work has developed, collecting it on graphs or in tabulations:

Within the freight transportation performances the ratio of international traffic (export-import, transient) increased from 43.7 percent in 1975 (17.3 billion freight ton kilometers) to 49.2 percent in 1980 (24.3 billion atkm [freight ton kilometers]), that is, increases by 40.2 percent. At the same time within the total of freight transportation the performance portion of the transportation enterprises will decrease from 88.1 percent in 1975 to an expected 86 percent in 1980.

Even though we cannot get sidetracked here to do a detailed analysis of the way transportation's distribution of work has developed, in some respects we will point out some of the reserves which can be opened up by systematic work in improving the efficiencies and by many-faceted measures.

Development of Transportation's Passenger Transport Performance (million passenger kilometers) and of the Distribution Among the Special Branches Between 1975 and 1980

Identification	1975	Distribution	1980 plan	Distribution	Index 1980 1975
Railroad transportation	14.8	19.8	13.5	91.2	91.2
Bus transportation	10.5	14.1	14.0	13.7	133.3
Air transportation	0.6	0.8	1.1	1.1	183.3
Waterway transportation	0.1	0.2	0.1	0.1	100.0
Intercity transportation, total	26.0	34.9	34.9	28.2	110.4
Budapest mass transportation	8.3	11.8	8.8	8.6	100.0
Mass transport in the districts	3.3	4.4	4.5	4.4	136.4
Local mass transportation, total	12.1	16.2	13.3	13.0	109.9
Miscellaneous transportation, total	36.5	48.9	60.0	58.8	164.4
of this:					
personal transportation	24.0	32.2	41.7	40.9	173.7
public buses	5.1	6.8	11.0	10.8	215.7
Passenger transportation, total	74.6	100.0	102.0	100.0	136.7

As this can be seen, freight transport by public highway transportation has grown extremely dynamically, while that of the railroad hardly exceeds 8 percent. At the same time this also means that very many goods which call for rail freight transportation have been transferred to the public highways due to lack of capacity. Just one example for this: between 1971 and 1977 the amount of the construction material industry's gross production value increased by about 40 percent. During this same time the railroad without any changes continued to transport 25 million tons of construction industry materials annually. Essentially the entire increment was passed on to the public highway transportation which has high specific equipment, live labor and energy requirements.

Better utilization of the truck park owned by public entities shows further opportunities to increase efficiency. In 1978 with each ton of capacity the so-called public-use transportation on public highways moved 1,038.6 tons, and performed 26,108.7 freight ton kilometers of service, while the so-called "vehicle park owned by public entities" moved only 617.2 tons of freight with each ton of its capacity and its performance was 9,659.4 freight ton kilometers, 36.9 percent of the former one. Even though the tasks, composition and organizability of the vehicle park owned by public entities are different from those of the public-use one, the data are still cause for concern.

Diesel Instead of Gasoline

Similarly better utilization of the capacity of bus transportation by buses owned by public entities provides some opportunities to increase efficiency even if in only a limited way. Let us see an example as comparison:

In the first half of 1979 the closing inventory of VOLAN's [Bus Transportation Enterprise] bus park was 7,958 buses, and the number of passengers transported per space capacity--at 46.49 percent utilization of the space capacity-was 1,452 persons. The bus inventory of public entities without buses with capacities of 10 to 20 persons was 5,258 buses. With 44.77 percent utilization of the spaces--and with undoubtedly longer average trip distances--the passenger volume per space was only 231 persons. Let us add to the two public highway examples of public entities that the gross value of the equipment inventory tied down here amounts to almost 50 billion forints and employs more than 150,000 persons. This is why it is expeditious to make better use also of these capacities within the limits of possibility.

Specific energy consumption of transportation is gradually improving. At the Volan Trust for example the specific energy consumption decreased for diesel driven trucks from 6.81 (liters per 100 freight ton kilometers) in 1971 to 5.26 in 1978, for gasoline driven trucks from 15.50 to 12.62 and for buses from 12.41 (liters per 1,000 passenger kilometers) to 10.39. The railroad's specific energy consumption decreased from 132.77 kcal per freight ton kilometers in 1975 to 104.21 in 1978, and from 205.63 kcal per passenger kilometer in 1975 to 182.64 in 1978.

But there still are significant reserves in specific energy consumption, it is shown by the fact that for example in 1977, 58.5 percent of the 122,399 trucks were gasoline driven. A merely 1 percent decrease in gasoline driven vehicles and replacing them with diesel powered ones would result in fuel savings of 5.9 liters per operating hour.

Transportation's activities of earning and producing foreign currency are growing significantly. This is indicated by the fact that the branch's gross foreign currency production expressed in forints increased from almost 8 billion forints in 1975 to expectedly in excess of 13 billion forints in 1980. The rate of growth is significantly higher than the rate of international activity and the efficiency of foreign currency production is also favorable. But the results could be even greater which is indicated for example by the fact that the ratio of domestic semitrailers is decreasing for the Hungarian goods being transported out of the country in semitrailers on the public highways, or that the overwhelming majority of the capacity of Hungarian sea-shipping is used by other than the Hungarian foreign trade.

Multitude of Excuses

Because of this, even the foreign currency income produced at an increasing rate by the Hungarian transportation equipment cannot sufficiently counterbalance the country's foreign currency freight expenses, thus in the final analysis its capitalist foreign currency balance for freight is gradually deteriorating.

Directing the traffic from railroad lines with weak traffic onto the public highways has improved the efficiency of transportation's work. By the end of 1979 the traffic of 1,606 kilometers of railroad lines are expected to be redirected to the public highways. This action, affecting 22 million passengers and 2.5 million tons of freight, after deducting the expenditures, will make savings of about 790 million forints of investments and annually 190 million forints of continuing [operating] expenditures possible for the national economy. The redirecting--contrary to the popular beliefs--was accompanied by a reduction in employees and it did not even make the specific energy consumption worse!

Increasing the efficiency of transportation still has numerous external and internal reserves. These can be exploited by increased cooperation between the shippers and the freight haulers and by further improving the organization of transportation's work. We will introduce a few of these, with no intention of giving a complete list.

Introduction of staggered working and school hours can on the one hand decrease crowdedness (introducing it in Budapest resulted in a 15 percent decrease in crowdedness), or on the other hand the number of vehicles required, if crowdedness is to remain the same.

Computerized structuring of the bus runs, experimentally developed and introduced by domestic application of value analysis, involves at least 10 percent savings of vehicles in the large cities. It would be desirable to spread both of these at a faster rate. Further, it may result in significant savings in intercity freight transport on the public highways if the present multitude of excuses were eliminated in organizing the freight for the return trip by means of computers. And the associations thus far created and functioning show that utilization of the vehicle park owned by public entities can be increased significantly by organizing freight partnerships, freight associations.

Deteriorating Vehicle Trip Times

Additional reserves can be opened up by coordinating the production-distribution, warehousing-consumption and transportation jobs, and by resolving the narrow crossection of the transportation chain. The shippers can significantly improve utilization of the transportation equipment if they load and unload the shipments on time, and if they help decrease the weekly and monthly peak periods the extents of which are increasing.

There are significant internal reserves also in the transporation itself, among which the fundamental issue is further increase of equipment utilization. The gross value of public-use transportation's equipment inventory (including the public roads) was 338 billion forints in round figures in 1978, and this made up about one-fourth of the equipment value of the material branches. Exactly because of this, it must be achieved first of all that the gradually deteriorating tendency of railroad car trip times should be turned in the opposite direction, since one-thousandth of improvement in railroad car turnaround time is equivalent to saving about 1,500 cars! The growth in the quantity of freight cars undergoing repairs, the so-called freight car repair percentage must be stopped and it must be gradually decreased. At the same time the daily working time of public-use truck park on the public roads must be increased.

By raising organization to higher levels it can be achieved that the efficiency of the transportation operation should further improve by improving the individual operating performances and technical-economic indices (such as for example decreasing the specific waiting times, the daily empty run performances, etc.). There is more than a little to be done in concentrating the investments, decreasing the completion times of investments and the completion costs which in some cases significantly exceed the planned amounts. Since in 1979 the value of transportation investments surpassed 23 billion forints, each percent saved amounts to hundreds of millions.

Increasing the efficiency of transportation--considering the extremely high equipment, live labor and energy requirements of the branch--requires close cooperation with the industrial, construction industrial and foreign trade organs which provide the transportation's equipment. Only through joint efforts with them and with the shippers can it be achieved that the branch would efficiently fulfill the increasing transportation needs of the national economy and of the population.

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CHANGES IN AGRICULTURAL REGULATORS ELUCIDATED

Budapest FIGYELO in Hungarian 21 Nov 79 p 13

[Article by Dr Ferenc Szabo: "New System of Regulators in Agriculture"]

[Text] Agriculture is characterized by a special set of prices and values. To provide the conditions of reproduction and material incentives, it is necessary to complement purchase prices, kept at a relatively low level, with various price supports and other production subsidies.

The means of agricultural production became more expensive as a result of the rising prices of energy and raw materials combined with their ripple effects (rising prices of chemicals, metallurgical materials, machines, spare parts, etc). A substantial portion of the extra burdens associated with these trends was compensated by increasing subsidies, since the possibilities of producer price increases were limited. A gap has arisen between producer prices and the levels defined by the value judgment of the market (especially the international market); as a result, the market flexibility and cost sensitivity of agricultural producers declined.

Extent of Price Rises

Therefore, it became urgent to ensure that agricultural enterprises purchase the materials and means of production at prices which more closely correspond to true national economic cost. It is also necessary to make sure that agricultural producer prices better reflect both one-time and ongoing expenses and world market trends; they should work toward the emergence of a production structure that corresponds to our national economic requirements and conditions.

Agricultural prices were raised on the basis of the analysis and checking of a number of factors. Agricultural production is divided into several sectors; production conditions vary among enterprises. Modern large-scale enterprises employing the most advanced technologies coexist with small producers working with traditional methods. We had to take into account the fact that the marketing opportunities of agricultural products are significantly influenced by domestic consumer prices as well as foreign market prices.

Within an average price increase of 11 percent, animals and animal products went up 14 percent and crop prices 7 percent. The modification of the income ratio between the two main sectors was aimed at the creation of a production structure in accordance with rational conditions. For example, where conditions for animal husbandry are good, it should pay to engage in it on an intensive basis.

Extent of the Most Important Price Increases

	Price increases in forints	 percentage
Wheat (food quality)	18	6.1
Corn (q)	28	10.2
Sunflower (q)	50	5.8
Rice (q)	200	19.6
Fruits and vegetables (average)		10.0
Wine grapes, grape juice and wine		7.0
Beef cattle (q)	2.50	8.2
Fattened pigs (kg)	2.50	9.2
Lamb (kg)	6.00	13.2
Frying chicken (kg)	5.00	15.9
Cow's milk (liter)	0.40	7.0
Fish (kg)	6.00	27.7

q = quintal

It must be added that large-scale agricultural enterprises will receive a special premium of 3.50 forints per kilogram of beef and 3.00 forints per kilogram of pork they raised and fattened; as a result, in this case the price increase will be 12.8 percent and 19.2 percent, respectively.

The price supplement paid on milk sold by large-scale enterprises will increase from 1.40 forint per liter to 1.80 forints per liter, an increase of 14 percent.

With More Expensive Means

In conjunction with the rising prices of agricultural products, there will be increases in the prices of industrial materials and implements used in agricultural production; this is in part due to rising import prices and in part to declining state subsidies.

The average price increase for protein feeds will be 25 to 30 percent; for industrial animal feed mixes it will be 20 percent.

In addition to animal feed price increases, there will be substantially higher prices for other means of production (circulating assets and capital goods) used in agriculture.

Price Changes (in percentages) for the Most Important Means of Agricultural Production

Fertilizer	15
Pesticides	25
Spare Parts for Agricultural Machinery	23 to 28
Agricultural Machinery	25
In particular:	
Power machinery	15 to 18
Implements produced domestically or imported from socialist countries	20
Animal feed harvest machinery	28
Special machinery (e.g., machinery for vegetable and sugar beet production)	65

In addition, agricultural enterprises must also face price changes in the fields of energy, construction materials, lumber products, etc. Amortization costs will also increase as a result of declining subsidies.

Official price regulations will remain in the foreground in agriculture, despite the general trend in the national economy as a whole toward an increasing role for world market prices, along with centrally regulated prices, coupled with an increasing opportunity for enterprises to enter into agreements with each other. This is related to the fact that consumer food prices will continue to be set by central authorities.

Agricultural producer prices enjoy a substantial degree of production and development support throughout the world. Without such support, our domestic agriculture would not be able to compete.

Automatic Support

Since agricultural purchase prices still will not provide the income necessary for expanded reproduction, state subsidies will continue to play an important role.

Differentiated support for construction and replanting, coupled with supplements to the development resources of enterprises, is intended to influence the direction of production development and future structural transformation. The average level of support will be reduced in conjunction with the purchase price increases (about one-third of the subsidies of the past will be "built into" higher prices). The system of subsidies will become somewhat simpler and clearer.

For certain construction and replanting projects, agricultural enterprises will receive a 20-percent base subsidy which is intended, in essence, to replace development resources that are not recovered through prices. In addition, special investments serving highly important development goals related to targets of the national economic plan may receive an additional 10 to 20 percent special subsidy.

Under certain conditions both the base and supplementary support payments are automatic. This insures that agricultural enterprises are able to make development decisions on the basis of the availability of this support as part of their development resources.

Support payments based on a system of application and evaluation will be used much less frequently than at present; their use will be restricted, in essence, to the development of food-processing capacity.

Separate subsidies for agricultural enterprises with low quality or obsolete equipment will be eliminated. The resulting reduction of development resources will be largely compensated by lowered land and income taxes levied on these enterprises.

Stress on Local Resources

Starting from 1980, the following will no longer be subsidized: fuel and water storage facilities, seed-treatment plants, processing plants, installations for grape and fruit production, facilities for the preparation and storage of grape and fruit saplings, grape-processing plants, worker's quarters connected with specialized facilities, youth construction camps and facilities for local purchase, marketing and processing of milk.

State support for the planting of berries and some stone fruits, grape planting and modernization support in the Tokajhegyalja wine region as well as planting of fruit and grape stock will be reduced from 50 percent to 40 percent.

Support for cold storage facilities, vegetable and potato storage facilities, feed mixers, large buildings for the raising of poultry, pork, lamb- and fish-processing plants, milk-processing plants, road building by enterprises and liquid manure treatment plants will be reduced from 40 percent to 20 percent.

State support for facilities related to the raising of beef cattle, pigs, lamb and poultry, fish ponds, grain, fertilizer and pesticide storage facilities, hothouses, irrigation plants and water supply facilities (wells, water conduits, etc) will either remain unchanged or change very little.

Some facilities which were not eligible for support before, e.g., machine maintenance stations and various kinds of food-processing plants, can now receive up to 20 percent state support, based on new support regulations.

Support for machinery will decline to about one-third of the present level. In particular, support for helicopters and cropdusters will be eliminated; support of implements will go from 40 percent down to 15 percent; support of special machinery will decline from 60 to 70 percent at present, down to 40 percent; support for tractors will continue at 20 percent.

The extent and structure of support for soil improvement activities will remain unchanged.

Help For the Weak

So-called large-scale enterprise premiums are among the special tools of the system of agricultural regulators. The operation of such incentives will remain essential in some sectors, e.g., beef cattle and lamb. On the other hand, the obsoleteness premium will be eliminated in pig breeding; similarly, working capital payments will cease in dairy farming.

Agricultural prices will continue to be based on the production costs of enterprises with average conditions. As a result, large-scale enterprises operating under worse than average conditions will enjoy continued support.

For these enterprises, the two main forms of subsidy will continue to be price support and development aid.

Price supplements are intended to help in the formation of a production structure better adapted to local conditions that can lead to the largest profits locally; they are also intended to compensate for justified extra production costs. In order to accelerate the transformation of the production structure, basic price supplements defined as a certain percentage of sales receipts are combined with special price support payments to provide incentives for the production of certain special products especially well suited for local conditions in some regions (e.g., sunflowers, lupine, tobacco, berries, lamb, beef). Enterprises with unfavorable conditions are entitled to receive price support payments for products of household plots marketed through the cooperative (pigs, beef, milk, vegetables and a new product: berries). This arrangement is being expanded to include milk and berries from other small producers in order to provide further incentives toward integration activities of large-scale enterprises.

Development contributions are intended to complement the development resources of less favorably endowed enterprises by assisting in the implementation of development goals which form an organic part of the local region and are outlined in enterprise development plans. They may also receive development loans, repayable from production taxes of the operation in question, for the development of auxiliary operations in accordance with the interests of the national economy and local conditions.

Uniform Taxation

The changes in agricultural taxation are not aimed at reducing the income of agriculture as a whole; their aim is more efficient withholding of differential allowances and the reduction, or at least rational limitation, of differentiation. In addition, the application of uniform principles and standards for the taxation and income regulation of all large-scale agricultural enterprises, including cooperatives and state farms, will represent an important change starting in 1980.

Land taxes will be reduced for enterprises operating under worse than average conditions with higher production costs; on the other hand, taxes will go up for those farming better lands and producing higher incomes.

The development of the taxation system for enterprise incomes is based on moderating income differentials related to differences in conditions, without posing an obstacle to the development of production and the operation of incentives toward improved efficiency, i.e., without siphoning off income obtained as a result of high-quality work. These goals, combined with the importance of cooperatives within the agricultural sector, argued for the application of taxes levied on gross income in both groups of agricultural enterprises during the coming plan period; this type of tax applied only to cooperative farms in the past. Under this system, enterprises pay income taxes according to per capita gross income with tax rates increasing for each bracket. The modified tax rates will result in lower taxation of low-income enterprises. At the same time, improved results in enterprises showing dynamic progress, high production levels and high gross income will not be accompanied by progressive tax increases.

Agricultural enterprises pay production tax on their operations outside of their basic field of activity (industry, construction, trade, service, etc). This is intended in part to compensate for the effects of different sets of regulators in agriculture and in other sectors, and in part to provide a certain amount of steering (incentives and limitations). This tax will continue in the future; it will, however, be subject to some reductions in accordance with changes in regulators. The 30-percent tax withholding exemption of cooperatives with unfavorable conditions will be increased to 70 percent.

Income In Line With Results

The most important task of income regulation is to influence the personal income of the agricultural work force in accordance with general income policy. In the interests of reducing income differences, it is desirable to ensure that tax-free increases in income will remain possible, at an above average rate in low-income enterprises where economic results justify them, and at a more moderate pace in enterprises with higher income levels. In addition, acknowledgement of efficient production increases will play a much more important role in the regulation of personal incomes.

Accomplishment of the desired goals became possible as a result of separate regulation of the two components of personal income: wages and share dividends which are a function of economic results. At present, wages paid during the year by cooperatives are already subject to autonomous movement. It is impossible for cooperative farms to separate themselves from their economic surroundings when formulating their wage structure. As a result, wage regulations will still allow regular yearly increases in line with average wage trends This is complemented by certain types of preferences to provide the basis for increases in average wages in line with the quantity and quality of the work performed (in particular, output, improved work productivity, modification of the production structure, improvement in quality of training).

Incentives toward efficiency and improved economic operations can and should be applied primarily in the area of the other component of personal income: share dividends based on performance. The size of tax-free supplementary share dividends was determined on the basis of the size of per capita enterprise profit. This ensures that higher material rewards are available in enterprises with improving economic performance or above average results.

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POSSIBLE ENERGY SAVINGS IN AGRICULTURE VIEWED

Budapest FIGYELO in Hungarian 28 Nov 79 pp 1, 2

[Article by Istvan Kovacs: "Energy From the Fields"]

[Text] A swift growth in the productivity of live work has been characteristic of the development of agriculture thus far. We have gained the front rank in the world in a few branches of production--wheat and corn production. The quality of the product has improved and the efficiency of production has increased but the greatest reserves, the unexploited opportunities are still here.

There is need for strict thrift in regard to assets and energy as a result of the changes which have taken place primarily in the past 5 years in the world economy--primarily the leap in material, fodder and energy prices--and as a result of the extraordinarily sharpened competition and stronger discrimination and protectionism. On the basis of an analysis of long-range world economic changes and trends developing in our homeland it is plain that increasing efficiency, rational, thrifty use of energy and developments connected with these tasks will receive priority in the next phase of the development of our agriculture.

Plow Land Reserves

The agricultural area of the country has decreased by 380,000 hectares as compared to 1960. It is true that the rate of decrease has moderated in recent years but even compared to 1975 crop production now takes place on less area, by more than 70,000 hectares. And the trend has not stopped. So each year agriculture must increase production by 2-3 percent on less and less land. Rational utilization of plow land is of ever increasing importance under such circumstances.

Rough and bulk fodder are produced on nearly 1 million hectares. According to the records of the MEM [Ministry of Agriculture and Food Industry] there are about 700,000 hectares of meadow and pasture which could be made suitable for continual, large scale cultivation with proper renewal and melioration.

Despite the development of recent years the production of bulk fodder on plow land and the management of grass lands is at a low level; the mechanization of cultivation and harvesting has remained substantially behind that of grain, corn and industrial crops and the yields per hectare are moderate as a result. According to the calculations of the MEM about 4-4.5 million tons of by-products from crop production each year could be used to feed the present cattle and sheep stocks if the farms could harvest them in good quality. In the absence of this bulk fodder for cattle and sheep is now produced on a greater area than justified. Pal Izinger publishes interesting data on this in issue No 10, 1979 of GAZDALKODAS. By increasing yields, quality and the utilization of by-products--while developing the material and technical conditions--it would be possible for our farms to reduce by 20 percent the area of plow land sown to bulk fodders. The plow land thus released could be used to produce grains or industrial crops as needed.

Cultivation of scattered areas and of internal water areas which are more and more concentrated in some areas each year presents a problem in the more efficient utilization of agricultural land. This involves nearly half a million hectares which cannot be cultivated optimally in regard to time or quality. Production requiring greater than average expenditures is uncertain on these lands also. A large part of the farms working here are deficit each year. This situation can be changed only by complex melioration.

Although many still dispute it the results of experiments in soil cultivation and practical experiences around the world prove that significant energy could be saved by soil cultivation without plowing (disking, harrowing, soil cutting, etc). Thus in every area where deep plowing is not justified for plant health reasons they should shift to soil cultivation without plowing, combined with deep loosening. Today, however, only a small part of our large farms have the equipment needed for the swift, professional execution of such procedures.

50 Billion for Fodder

Today agricultural production has more or less gone beyond the quantitative problems. In the course of developing their production structure the farms can deal more and more with an optimalization of quantity, quality and expenditures, with the territorial location of crop types and with selection of types suiting the conditions. A number of examples prove that in those areas in North Hungary and in western Trans-Danubia where the conditions for economical corn production are lacking it is better to produce barley, which requires substantially less cost and energy expenditure.

Cultivation of grain types and hybrids which require shorter growth time and which suit the natural conditions is of great importance in moderating costs and energy use. The grain-straw ratio of these types is more favorable so less nutrient and energy are needed to produce the same amount of grain. As a result of a recognition of this, among other things, the production ratio of short and medium ripening time corn hybrids and rice types increased greatly this year and probably the amount of heating energy used for drying will moderate also. We have further possibilities in the area of corn, rice and sunflower production. The dehydration capability of the plant at maturity must be regarded as important in the future from the viewpoint of classification and propagation of the types used. The advantage must be given to those types which give up their moisture more quickly--without damaging other standards--so that less energy will be needed for drying. In the further development of the structure of crop production economists have the task of defining those threshold values on the basis of which we can develop the optimal ratio of crops produced for the same purpose as a function of changing energy and material prices. On the basis of these one can imagine the case where the advantage will be given, in the production of fodder grains, to those types which give smaller average yields but which can be produced with substantially less energy.

It Exists But It Is Not Used

Fodder management has a great role from the viewpoint of increasing efficiency and energy management too.

Each year our animal husbandry uses fodder worth nearly 50 billion forints; a saving of a few percent could be measured in billions. As a result of measures taken in recent years specific feed use has decreased, the quality of bulk fodders has improved and there has been a significant increase in the use of by-products and so-called NPN (carbamide) materials. But further progress--swifter than heretofore--will require coordinated development work by the chemical industry, machine industry and construction industry, better service to agricultural production and research which precedes practice. The Fodder Research Institute established in Godollo by the MEM is called on to serve this purpose, among others.

The Third World Fodder Congress in Madrid established that a developed chemical industry is indispensable for the general spread of the many hundreds of types of chemicals and fermentation products which can be used today in efficient feeding. The chemical industry--including the fermentation and pharmaceutical industries--in developed countries produces large quantities of preservative, flavoring and yield increasing materials and medicinal and preventive materials. Use of these has brought very favorable results. The prospects and possibilities for using chemical industry products in feeding is indicated by the fact that the largest and most perfected industrial enterprises are increasing their investments in the feed industry so that their role is increasingly definitive in the development of feeding. The role of the machine industry and construction industry background is no less because high level fodder production and utilization of by-products cannot be imagined without modern, highly productive machines, storage and cheap and modern buildings for efficient animal raising.

Every method which increases the digestibility and internal content of feed used in feeding animals which consume rough and bulk fodders serves to save feed. Production and use of the enzymes and fermentation products (cellulose, amylase, monensin, etc) needed for this take place throughout the world; the domestic spread of them is held back by manufacturing shortages. As in modern feeding a great role is played by those chemical materials which give favorable results in feeding animals and in increasing the utilization of bulk fodders in that they increase the energy content of feed upon being added. (These include propylene glycol, propiolic acid, combinations of these, etc.)

Since the protein content of crop by-products and bulk fodders is relatively small--and increasing their use is indispensable for cheaper feeding--it is necessary to supplement the protein. Because of the biological properties of ruminant animals it is possible to supplement the protein in large part with carbamide preparations and distillery by-products with high amide content (vinasse). But the carbamides used today are less suitable for this and in the absence of processing capacity the distillery washings which are the primary material for vinasse go into the sewers, greatly polluting the environment. According to calculations of the MEM the failure to produce vinasse results in the destruction of energy and protein supplement feed equal to about 25,000 tons of fodder grain each year. This 25,000 tons of fodder grain is worth about 3.5 million dollars. This is how much it would cost to buy the equipment needed to produce vinasse and this means that the investment would pay for itself in 1 year.

Expensive Drying

The large farms use nearly 2 million tons of corn to feed swine, cattle and sheep. In recent years--depending on the weather--it has required 4-5 kilograms of fuel oil per quintal to dry the corn to the 13-14 percent moisture content needed for traditional storage. The cost of drying has reached 40 forints per quintal. It is to be expected that the increase in energy and other prices will increase this cost further.

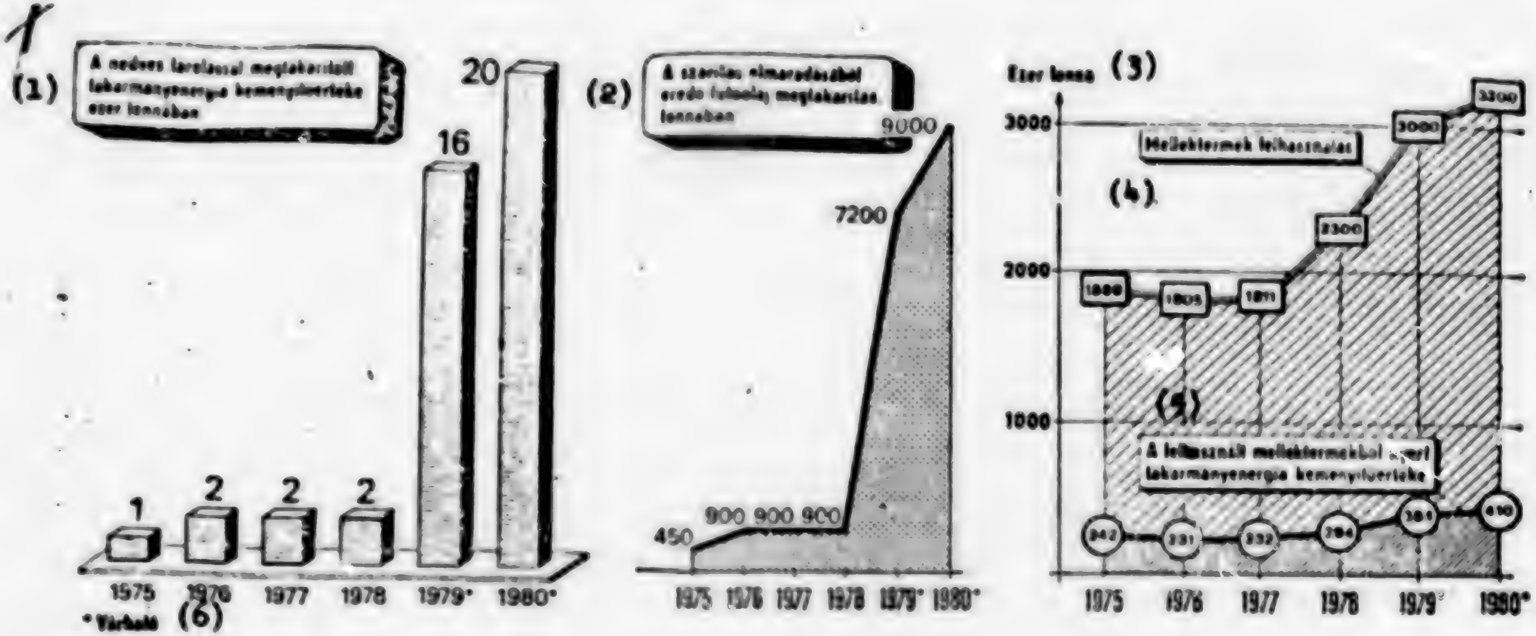
Costs and energy use can be substantially decreased only if we create the technical conditions and develop the technology for storage and use without drying. About 15 percent of the internal content of the corn is lost as a result of high temperature drying also. This could be avoided only with storage without drying and storage in airtight silos is a technically perfect method for this. A 1,000 carload airtight silo costs about 20 million forints more than the same size traditional storage equipped with driers but according to preliminary calculations this 20 million extra expenditure would be repaid very quickly. The MEM is experimenting with this in Veszto. There are also possibilities for simpler methods such as storage in foil lined trench silos and propiolic acid and sorbic acid methods.

The mixing plants also use thermal energy to granulate the 800,000-900,000 tons of supplements. Today, however, there are several solutions which will make it possible to do the granulation with materials which can be produced here at home (bentonite, hemicellulases, calcium lignosulfonates).

This method is used very widely in western countries and it would be justified to accelerate its adoption.

More than 15 million tons of by-products arise in crop production each year. For example, the energy of one hectare of corn stalks is equal to the energy of 1,200-1,500 kilograms of fuel oil. According to estimates by the MEM it should be possible to use about 6-7 million tons of by-products to produce heat--if there are conditions for mechanical harvesting--and this would well serve to satisfy the local energy needs of agriculture. The mass production of equipment and technologies for collecting by-products and using them for heating would be an important technical development task. The Agard Agricultural Combine is now discussing the purchase of a boiler which could burn by-products and wastes. The offering price for a 2 million kilocalory boiler--which could be manufactured here at home in the future--is about 350,000 dollars.

All these possibilities--if they were realized--would save the people's economy several billion forints and significant foreign exchange each year. But their broad use cannot be imagined without investments. So the spread of good methods already known depends on when the technological solutions and mechanical equipment and investment possibilities are available to the users, at what rate and in what quantity and quality.



Key:

1. The starch value, in thousands of tons, of the fodder energy saved with wet storage.
2. Fuel oil savings, in tons, deriving from abandoning drying.
3. Thousands of tons.
4. Use of by-products.
5. The starch value of fodder energy obtained from by-products used.
6. Expected.

8984
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AGRICULTURAL COOPERATIVES COPE WITH PROBLEMS OF MECHANIZATION

Budapest FIGYELO in Hungarian 28 Nov 79 p 13

[Article by Janos Perczel: "Problems of Mechanization in the TSZ's"]

[Text] Materials and tools of industrial origin have become the determining factor in agricultural production. For example, the value of the machines of the producer cooperatives is about 50 billion forints. The effective and economical use of these is an important task of the TSZ's [producer cooperatives]. During the Fifth 5-Year Plan the quantity of machine work per 100 work hours in the producer cooperatives increased by 18 percent for tractors, 12 percent for combines and 7 percent for other self-propelled machines. Soil cultivation, restoration of nutrients, sowing, crop cultivation, planting and the harvesting of grains, corn, green peas and green beans are completely mechanized.

The mechanization of animal husbandry is uneven. One quarter of the cattle and one half of the swine of the TSZ's can be placed in specialized sites mechanized at a high level.

Agricultural work--soil cultivation, crop protection, sowing, crop cultivation, transportation and harvesting--is only partially mechanized in the household plots of the producer cooperatives. The possibility of offering large scale aid to these jobs is also limited. The size and fragmented nature of the household plots make use of the machines of the large farms impossible or only possible in spots.

A Difference of 3.5 Times

In some of the producer cooperatives the present supply of machines does not make possible even the timely completion of basic agricultural work (for example, fall deep plowing, sowing, harvesting, etc). Another group of TSZ's is being forced to renew its supply of machines at an earlier level of development, deviating from the real needs, in the absence of an appropriate selection.

There are significant quantitative and qualitative differences among the cooperatives in the mechanization of work processes.

There is a difference of 3.5 times between the value of machines per hectare in the two extreme groups of farms. In addition to the substantially lower machine supply in the cooperatives working poor quality land there is a higher ratio of machines written off and developmental resources are a good bit smaller.

More Important Indexes of Mechanization For the 1,033 Producer Cooperatives Engaged Primarily in Basic Activity (Values per Hectare of Plow Land, Garden, Vineyard and Orchard)

Number of TSZ's	Gold Crown Value	Value of Machines in Forints	Amortization of Machines in Percent	Developmental Fund, Forints per Year	Developmental Fund, in percent of gross income
58	18.4	7,678	43.4	917	17
240	20.3	9,897	42.6	1,041	18
591	22.0	13,479	40.5	1,467	19
119	24.9	19,091	38.4	2,331	21
25	23.8	26,187	37.5	3,587	24

The machine needs and machine purchase possibilities of the farms move over a broad scale. Trade can follow these only in part. Recently the stockpiles of trade have increased while unsatisfied farm needs increased.

Manufacturers' Mistakes

In especially short supply were the appropriate rough fodder harvesting, gathering and loading machines, machines for harvesting fodder corn stalks, vegetables and fruit, etc. Replacement of large capacity machines and machine systems is causing problems for a significant number of farms too.

The ratio of machines already amortized but still in use increased during the Fifth 5-Year Plan. This ratio increased from 12.5 percent to 22.5 percent for tractors, from 24 percent to 34 percent for combines and from 7 percent to 16 percent for trucks. The reduction in development resources forced the farms to continue operating the machines. But operating the amortized machines increases production costs and makes production uncertain too.

Protecting a trade name and trying to win customers are little realized in domestic machine manufacture and machine trade. Last year about 70 percent of the machine breakdowns were due to neglect by manufacturers--design or material problems. Temporary and sometimes chronic shortages are still common in spare parts supply. Nor is specification adequate in parts supply. Frequently expensive subassemblies have to be replaced because parts worth a few fillers are missing.

The cooperatives use about 8 billion forints worth of materials and parts each year to maintain the machines. But they are forced to stockpile more than necessary because of supply uncertainty. Naturally this ties up significant circulating funds. In addition to the cost of parts and materials used considerable is spent on wages and on fees for service.

"Quack" Repairs

Maintenance conditions in the producer cooperatives have lagged behind the requirements. There are few repair shops on the farms. And the existing ones are fragmented. The shop area available is less than half what is needed (880,000 square meters) and the larger part of this area is unsuitable for repairing large capacity tractors and machines--which simply do not fit in.

Recently more and more cooperatives have been regarding the creation of a maintenance background as a basic condition for production. But there are still many cooperatives where they underestimate the necessity of this. In these cooperatives technical activity is generally limited to correcting the most common problem. These farms make use of the services of outside organs to take care of operational repair and maintenance tasks. This involves primarily diagnostic tests, tune-ups and corrosion protection of machines, contact protection of the electric network and service beyond the guarantee. Regional associations, production systems, cooperative associations and other organs also provide services.

Technical tasks which cannot be organized economically and professionally on individual farms have been listed in the sphere of industrial services. The most important of these are the guaranteed repairs for new machines, rebuilding subassemblies for complicated machines, major repairs for large machines--tractors, self-propelled harvesting machines, trucks, buses, etc--and the manufacture of spare parts.

Guaranteed repairs for new imported machines is generally the task of Agrotroszt and for domestic machines it is the task of the manufacturers. In theory! With the exception of a few domestic factories the guarantee tasks are performed by various service organs--large farms, production system centers, associations and the Mezogep enterprises. But this sort of guarantee service is complicated and frequently formal. Many times the material and personnel preparation of "quack" repair organs is deficient and their decision making authority and material interest are inadequate. The production systems are most likely to be able to satisfy the obligations taken over.

That Which Depends on the TSZ's

In recent years industrial enterprises have been dealing less and less with the rebuilding of subassemblies of complicated machines, with major repairs of large machines and with manufacture of spare parts (with the exception of spare parts manufacture). For example, in 1968 23,000 engines were rebuilt; in 1978 only 5,000. The figures for feeders are 31,000 as compared to 1,800.

The primary reason for this is that because of the high price of parts the cost of a major overhaul for a large machine (for example, an IFA truck or a John Deere tractor) equals or exceeds the price of a new machine.

A significant number of cooperatives make good use of the possibilities offered by the industrial background. But further development and the possibilities of replacing mechanical tools have not been clarified in a reassuring way. Without this the high production level of the farms can be maintained only with difficulty.

But this situation should not represent some sort of free pass. The TSZ's must still see to the more economical, better utilization and multiple shift operation of the capacity of the tools, machines, equipment and vehicles at their disposal, making use of circumspect organizing work. They must reckon with more moderate developmental resources in creating the technical conditions for industry type production. Insofar as possible they should strive to mechanize those work processes whereby the utilization of existing machines can be increased, thus freeing significant hand labor and aiding the utilization of energy thrifty production and processing technologies.

8984
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RESULTS OF ECONOMIC ASSOCIATIONS IN HEAVY INDUSTRY NOTED

Budapest FIGYELO in Hungarian 28 Nov 79 p 15

[Article by Dr Laszlo Rieb, a deputy main department chief in the Ministry of Heavy Industry: "Economic Associations in Heavy Industry"]

[Text] In connection with the article titled "Economic Associations" in Issue No 36, 1979 of FIGYELO we communicate the following.

The associations belonging to the heavy industry branch which are functioning as legal persons are: the Hungarian Pharmaceutical Industry Association (MGYE), the Hungarian Chemical Industry Association (MVE) and the Chemical Industry Computer Technology Development Association (VSZFT).

In addition the enterprises under the supervision of the ministry participate in 15-20 economic associations. We do not have a complete picture of the number and workings of the associations because the creation of them or joining them is in the sphere of authority of the enterprises, without an obligation to inform the ministry.

The two most important economic associations of the branch, the MGYE and the MVE, came into being on 1 January 1968 as so-called forced associations. The crucial viewpoint in establishing them was to reduce the number of trusts and to increase enterprise independence. The economic goals put before the associations were defined by taking into consideration the independence of the enterprises detached from the abolished trusts, which had had full rights; these goals embraced, though in greatly reduced form, the tasks of middle level economic guidance organs, without the right of giving directives.

The associations, which became voluntary on 1 January 1979, have the goals of furthering the economic interests of the contracting enterprises and coordinating their joint activity in this regard, especially:

--coordinating research policy and activity,

--harmonizing enterprise development goals and investment policy,

--the uniform development of international scientific and economic contacts, including joint action in regard to foreign parties,

--providing mutual information concerning production and management plans, and

--representing the common economic interests of member enterprises and taking care of tasks deriving from application of economic regulators of a branch of industry character (the MGYE).

The VSZFT was formed on 1 January 1975 as an organizational association by 14 chemical industry enterprises on the basis of an independent decision. The goals of the association are: creation of an information system serving enterprise guidance and corresponding to the chemical industry computer technology guiding principles; carrying out the research needed for this; and performing computer technology services which satisfy the needs of the associated members.

The Trans-Danubian Productivity Association was formed in September at the initiative of the ministry and the formation of a Budapest Productivity Association is expected in the fourth quarter. The goal of the economic associations is to assist a more efficient utilization of enterprise resources and the development and implementation, through common work, of technical-economic solutions and organizational methods which help to increase the productivity of work.

The enterprises and institutions voluntarily participate in the joint work done within the framework of the association. The founding members of economic associations, which have no concrete legal or material obligations, achieved technical and economic results above the average and are management organs with a high level of organization. They demand of enterprises wishing to join the ability to aid by their participation the development and realization of commonly defined tasks.

In regard to the character and goals of the unnamed economic associations--embracing enterprises belonging in different supervisory and branch spheres--they gave themselves more limited goals than the foregoing in the solution of production, service and foreign trade tasks.

It is useful to deal in detail with the various cooperation contracts of the Chemical Works Planning Enterprise (VEGYTERV) which can be put in two groups in regard to goal and content: product development and entrepreneurial cooperation.

In general VEGYTERV initiates common product development with the research institute and/or with the plant manufacturing the equipment for the experimental testing or realization of a new design or process developed by it--primarily for use in the chemical industry. In general VEGYTERV covers the costs while asking for a license fee of 2-10 percent in the event of realization.

The annual price income of new products realized in cooperation with the manufacturing enterprises is about 100 million forints, a significant part of which supplements import or is for capitalist export. The entrepreneurial cooperation includes one prime contracting deal and one deal for the export of complete pharmaceutical industry plants.

Two main groups of conditions might be used to define the successful functioning of the economic associations:

--the cooperation should satisfy a real need; the associated partners should be able to fulfill this at a suitable level; and those directly interested in the given cooperation should recognize that this is the most advantageous solution which can be achieved.

--social recognition of the results jointly achieved for the cooperating organizations and people (for example, supervisory recognition of the professional and economic achievements of the enterprise and recognition for the solution of professional tasks).

The existence and functioning of the MGYE and the MVE do not fulfill, or do so only tangentially, the two groups of requirements outlined above. It can be stated that the practice of the two associations corresponds in part to the expectations of economic guidance and the aspirations of the member enterprises.

The coordination of research policy and activity is satisfactory in the MGYE; the cooperation of the member enterprises is most active in representing the common economic interests of the member enterprises and in taking care of tasks deriving from economic regulation.

The associations effectively carry out the services considered necessary by the member enterprises. Various themes are debated at the regularly held directors' council and work committee meetings, generally with the character of exchanging information. But the member enterprises do not always subordinate their individual interests to the group decisions. There is hardly any real cooperation demonstrable in the behavior of the member enterprises in harmonizing development.

The VSZFT came into being on the basis of complete voluntariness with the common interest of the founding enterprises. In return for their material expenditures and cooperation the enterprises expect from the economic association the development and introduction of an information system (the VIR) which can be used in practice.

In sum it can be stated that the situation, results and problems outlined in the article titled "Economic Associations" are also characteristic in the area of the ministry.

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POLAND

TRADE UNION JOURNAL COMMENTS ON SOCIAL NEEDS IN 1980'S

Warsaw PRZEGLAD ZWIAZKOWY in Polish No 10, Oct 79 pp 1-3

[Article by Wieslaw Wesolowski: "In the Perspective of the 1980's--On the Need for Harmony"]

> [Text] The future--that which is subject to planning--is more complicated at the threshold of the 1980's than it has ever been. A moment of reflection will suffice to realize the complexities of the conditions which the politicians and the planners must consider and thus to increase the interest in the proposed solutions.

The unchanging rule is to subordinate the economy to man, to select such strategies and methods of execution as will produce the maximum improvement of living conditions under any circumstances. As for the concrete aims contributing to the improvement of living conditions, we have them aplenty inasmuch as the previous party congresses adopted a few major programs, the implementation of which extends well into the 1980's. "Food," "housing," "health protection" and "education" are the aims of the economy which have not lost any of their attractiveness or urgency.

The point is not to search for and adopt new goals--reality will surface them anyway--but to achieve fully and efficiently those already adopted. Indeed, in addition to the continuing efforts to improve nutrition, to provide an apartment for every family and to assure universal intermediate education, we can expect to undertake new programs, resulting from the profoundly changed situation,--just as urgent,--such as mass transportation, an element of great significance for family life and compensating for the clearly limited extent of mass individual motorization. Another element of the quality of life whose importance grows, is environmental protection, including sufficient clean water.

These social needs, reflected in party programs and in governmental execution decisions, will have to be accomplished in the first half of the 1980's under conditions much more difficult than those prevailing now. If this is so, an appropriate adjustment of economic strategies and methods of application becomes crucially important. In addition to a more pronounced subordination of production to market requirements than in this five-year period, preparation of an export offer so attractive that it will assure the means to purchase fuel, raw materials and other components of production and supply under the conditions of incredible growth of trade barriers will be decisive for the rate of development and well-being of society. The past few months have proved more than convincingly that serious losses are suffered when there is no room for trade maneuvering because there are no means and no goods available; for instance, when it is necessary to export paint because there is a buyer despite the fact that this stops the production of finished products in various sectors. If imports continue to be the limiting factor in the production rate of whole sectors and divisions of the economy, and if it is unexpectedly necessary to cancel purchases, regardless of consequences, simply because there are no funds to pay for them, then the utilitization of national wealth cannot match social goals, let alone the fulfillment of our ambitions. Also, there is not the slightest doubt that the strategies and the methods of implementation must consider shrinking labor resources and the necessity to fill in the painful gaps in the economic infrastructure, especially in the fields of energy and transportation. Thus, the strategy must continually consider the need for involvement, on the one hand, and the freezing of investments, on the other.

Considering all these factors a few basic facts can be stated: the national agenda of tasks for the first half of the 1980's must be based on the criterion that should be accepted by all—of minimal outlays of all kinds--labor, energy, materials and capital. Progress and development, which will be much more intensive than now, should be based on improvement of quality on a national scale at the individual sector and enterprise level and also in respect to technology and product. Thus, the plan in all its aspects must not be just an outcome of bargaining among various organizations or a simple projection of the potential and needs of various ministries, sectors and enterprises but must be the result of comprehensive calculations in which computer technology replaces rhetoric. The plan must be fully balanced, even if it limits the growth rate or requires scaling down goals, because past results have proven that deficits (of men, materials and energy) cause a greater decrease in the accumulation of wealth than giving up aggressive planning in favor of a realistic approach.

And one more thing: In view of the complexity of both internal and external situations, the room for improvement in the economy the way it used to be done, i.e., room for improvement understood as the basic rebuilding of the pay structure, planning and management, has decreased. Of course, efficiency improvements at all levels and in all aspects of work are necessary, but they should be geared to better results. Major changes, which as a matter of fact never prove to be panaceas, have turned out to be unable to withstand the pressure of such pedestrian events as material and energy shortages, lack of pay discipline and market equilibrium.

Certainly, the 1980's will not be a period of 10-percent annual growth rate in national income, investments or wages. Nonetheless, there is the real possibility of a noticeable improvement of living conditions accompanied by a moderate rate of growth of a few percent. It should be noted that the percentage increase in the 1980's will be worth a few times more than at the beginning of the current decade. At the current rate of investment, the national wealth doubles every 10 years. To profit from this opportunity, however, requires far-reaching economic actions supporting the effectiveness of social policy all across the spectrum--from assuring the real value of income to establishing the socially acceptable ratio of the lowest and the highest income and the limits of perquisites. The progressive increase of retail prices imposed by many producers against the intent and the letter of the resolutions, leading, in addition to other consequences, to the monetization of social relations, also requires rational and decisive actions. Once again, the truth of the social nature of planning is confirmed. At this time, this is especially visible because of the intensification of the world-wide economic crisis--to which our economy is closely tied--and because of the new importance of raw materials, especially energy.

Years ago, dynamic movement and a fast rate of development sufficed to show economic development and to assure social progress. Today, this is rather a secondary criterion because in the international economy, the increased value of goods produced has lost its importance in view of limited demand, inflation and growing difficulties in providing raw material and energy supplies. Also, in relation to internal needs and yardsticks, development--i.e., a simple increase in the quantity or value of goods produced--does not make much sense in many instances. Further continuation of that kind of development would result in ever greater losses, e.g., pushing the production of raw materials or machine tools without assuring a sufficient supply of energy or means of transportation or filling supply gaps (resulting in, for instance, the Berliet being a good vehicle overall, but requiring a day of maintenance for each day of use). The conclusion is that there is need to change the criterion for alloting the means of production in the whole spectrum of production for the internal needs of the economy, for self-service establishments; final production will count for less, and actions aimed at obtaining harmony for more; harmony meaning sufficiency of energy for heavy industry, the Berliet's reinforced hydraulic tubing, the Pollen-Automatic packing, etc. This is a matter of not only efficient management, but also of the frame of mind of the people who come to work every day--their mental readiness for improvements and simply their efficient work. After all, the electric energy deficit--19th degree of feeding in August--[sic] not only puts in doubt the sense of building anything new, but also makes it difficult to work for a better internal organization because people see inefficient production and low utilization of equipment due to external reasons.

Action leading to the restoration of harmony, to closing gaps, has special significance for the effort conventionally known as digging into the reserve. The economy, viewed as a complete system, clearly shows that it can operate more efficiently. However, when this model is disassembled into its prime parts--plants and work stations--matters begin to look more complicated. Instead of a computerized calculation based on mathematical rules, a million equations appear with millions of variables--people. Even the best constructed economic system based on academic criteria is good for nothing if some of the workers are not willing or capable of change. Professional skills and the good intentions of the workers are for naught if working conditions do not agree with people. Nobody claims that our economic system is perfect or that each and every one of the 12 million employed is a model of diligence, conscientiousness and capability, but a total condemnation of our economic structure and our people would be an even greater misunderstanding. Besides, both of these quantities were precisely balanced during the year of our 35th anniversary. Between these two extremes lie the true reasons why there are still unused reserves--reserves understood as sets of economic shortcomings--and why such reserves still exist despite so many efforts undertaken at both ends, at the top and at the bottom. In many cases, little can be used from those reserves because of a lack of raw materials, energy, transport capability, etc. In as many other cases, those reserves are caused by certain behavior, habits and attitudes. In view of the obvious linkage, it seems indispensable to eliminate this harmful connection even if it were to cause a decrease in economic dynamism.

It is universally known that satisfaction with living conditions and the standard of living is based on comparison. K. Marx wrote about it in his "Hired Labor" and "Das Kapital": Satisfaction does not depend only on what an individual has, but also on what others have. The changes in the standards of social progress and economic growth which can be expected in the near future correspond (and this should be noted) to world trends. The energy and raw material crisis and the disturbance in individual transportation have caused a change in the scale of values prevailing in the most developed countries that were embracing until recently the wasteful consumption embodied in the celebrated slogan "use and throw away." Being rooted in a different tradition and having a different concept of life, we have brought the economy and significant part of the citizenry to a point where each of us begins to value the comfort of his home and his leisure more highly than an additional radio set, another pair of shoes or a suit. After all, other than the irritating disturbances most often caused by the inefficiencies of industry and commerce, the average person's consumption of important ingredients (other than meat) reached the level at which, for the sake of health, what matters is an improvement in the menu and not an increase in kilograms or calories consumed. Of course, this is a statistical truth; and this means that very many people waste a lot of time shopping for necessities.

For this reason, in the supply field, the most desired sign of an improvement of the situation and usually the first objective of planners' efforts is to make shopping easier.

Thus, in every field of consumption, for every component of the quality of life, changes of this type will count most, including easy commuting to the place of work, unspoiled nature, housing conditions, health protection and leisure. These tendencies will become more pronounced because, by the end of the 1980's, 1.5 million citizens will have a college degree and secondary education will dominate. These criteria must govern all activities aimed at the future, that is, planning. Of the standards used so far--national income real wages or any standard derived from those--considers these values which are of ever greater importance. Still, these values are real, tangible and can incorporate many of the old standards.

When the new quality of economic progress is successfully managed with the new standards of social development, then even the lower limit of national income growth, set by many of our experts at a 3.5-percent average annual growth in the 1980's, which is indispensable to sustain 6 million new citizens, to satisfy the needs of 2.5 million newly married couples and to repay our debts, may be felt as a greater improvement in the situation than the previous 10 percent rate which partially consisted of not-so-desirable goods and objectives. This, however, depends on all those who plan and create this income.

8801
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IL-86, AN-28 TECHNICAL, PRODUCTION DATA GIVEN

Warsaw ZYCIE GOSPODARCZE in Polish No 47, 25 Nov 79 p 13

[Article by Franciszek Krzysztofiak: "Airbus before the Gates"]

[Text] Two years ago an understanding was signed by the governments of Poland and the Soviet Union concerning the cooperative collaboration of the aviation industries of both states. It was anticipated in this understanding that: "Poland will activate its production in the years 1977-1980 based on Soviet documentation and will insure delivery to the USSR of systems and units for the IL-86 airbus transport plane. In exchange, while the understanding is in force, the USSR will insure delivery to Poland of IL-86 planes and other aviation technology products." One year later, a successive understanding was signed in Warsaw concerning Poland's undertaking of production of a passenger plane for local transport, the AN-28.

And behold, on November 15, and thus unusually quickly, before these documents had had a chance to become old, both aircraft could be seen at Warsaw's Okecie airfield. Let us introduce them in several sentences.

The IL-86 is a plane capable of transporting 350 passengers at a range of 5,800 km, with an average speed of 900-950 km/hour. Let the following technical data attest to its size: a maximum starting weight of 206 tons, a wing span of 48 m, length of 59 m, height of 15 m, four turbojet engines below the wings, each with a 13,000 kilogram-force of thrust. In a word, it is a flying elephant. At the present time it is in its final phase of state trials in the USSR. Four prototypes of it are already flying, the first of which has already made 585 flights. It is, as its designers insure, an exceptionally safe aircraft. All the systems determining flight safety have been multiplied. For example, the plane is equipped with a triple control system and with quadruple hermetic climitization systems.

Poland--inasmuch as our Aviation and Motor Industry Association the "Polish Aviation Works" (PZL) will take part in producing the airbus by manufacturing such complexes as the empennage (or, popularly speaking, the "tail" of the plane), wing mechanisms, and engine rigging--will be the country which will get the first IL-86 earmarked for export. As it is anticipated, the first airbus bearing the Polish Air Lines (PLL) "Lot" colors will be flying by the year 1981.

The AN-28 looks like a miniature next to the airbus. It carries barely 17 passengers and is earmarked for local transport. In connection with this use, a two-motor engine was constructed so that the plane can take off from small grassy airfields lacking concrete zones. At a 1,300 km range it builds up a speed of 300-350 km/hour. The AN-28 is supposed to replace the popular "Antka" (the AN-2) in the USSR for short flights, and in Poland, where it will be built, it is intended to constitute the basis of intervoivodship air transport. How very necessary this type of aircraft is for Poland can be attested to if only the fact that the "Antka" planes in the Soviet Union make 40 percent of the passenger flights, and this form of travel is considerably more widespread than in Poland. In our country, the airplane cannot as yet compete effectively with the railroad, at the least on account of the fact that the network of domestic airlines connections is sparse and that airfields and airplane parks are lacking. The AN-28 has every chance of insuring air connections with even small towns. I had occasion to certify the versatility of this aircraft (for example, the passenger seats fold up into the walls, creating ample space for freight) and its flight training value (its unusually short take-off run, its maneuverability) during air shows organized at Okecie. It is anticipated that the Mielec Transportation Equipment Plant will manufacture about 200 of this type of aircraft annually, with provision made for Poland and the Soviet recipient.

At the present time we are known in the world as a producer of helicopters, light planes and gliders. Most often there is no trouble selling them (we are speaking of course about sales for export, for domestic recipients--air clubs--are unfortunately treated carelessly), since our aircraft are known in the East and the West. What prevailed on us Poles to engage in the cooperative production of passenger giants? Was it merely the possibility of purchasing them later for the PLL "Lot"? The Minister of the machine engineering industry Aleksander Kopec responded to this question during a press conference on the flight deck of the IL-86. In wanting to build good small planes, we have to master the technology utilized in the construction of large planes--this is the most succinct way of presenting the guiding thought of his utterance. To produce the elements to be supplied to our Soviet partner, we had to master 80 new technologies, including, among others, titanium working, metal gluing, and processing of laminates. All the experience which the Polish engineers and technicians will gain will prove profitable in their own construction solutions. The costs incurred for know-how, although they have been substantial, have permitted an assurance to the Polish aviation industry of stable development for at least 10 years. And that counts for a lot in a situation on the world market when it is known that Western firms with rich traditions are struggling with serious troubles.

So much for the subject of fortifying the heart of the show of implements and capabilities of people sitting down at the controls. Being filled with sincere admiration for the achievements of the Polish aviation industry and of its fruitful collaboration with its experienced partners, I wonder only what will happen at Warsaw's Okecie airfield, or in Gdansk-Rebiechowa, when the 350-passenger airbuses are landing there. There is no doubt--it will be crowded.

8729
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SZCZECIN AREA PORT, BARGE SYSTEM VIEWED

Grain Handling Capacity

Gdansk TECHNIKA I GOSPODARKA MORSKA in Polish No 10, Oct 79 pp 587-589

[Article by Dr Jerzy Korzonek, Szczecin-Swinioujscie Port Authority]

[Excerpts] The Service and Production Effects

The organizational structure of the port authority created as of 1 July 1977 and the powers conferred by the statute produced a strengthening of its coordinating function and its ability to undertake and implement operational decisions in a flexible manner. Improved cooperation among all users of the port facilities was achieved and the integration of activities of all basic organizational units of the port complex permitted to achieve an increase in the level of service and an improvement of financial results (Table 1).

Table 1. Performance of the Szczecin-Swinioujscie Port Complex in the Years 1976-1978

Item	1976	1978
Value of services and work	100.0	113.9
Accumulation	100.0	107.7
Hard currency receipts,	48.1	63.3
hard currency zlotys in millions	16.3	18.0
Cargo turnover, tons in millions	22.2	23.4
including general cargo	2.6	2.8

The throughput in 1978 was 23.4 million tons while the throughput capacity is 22.2 million tons and that included the grain throughput of 2.2 million tons while the capacity is 1.1 million and the ore throughput of 3.7 million while the capacity is 2.7 million; this was possible thanks to organizational and technical improvements which increased the port throughput and compensated for the shortage of the port capacity. In the port authority, the accepted rule was to obtain the fastest possible economic results from investments and to use for loading and unloading the elements of not yet completed systems. On the wharf of the Chemists' Basin, still under construction, 703,000 tons were loaded and unloaded in 1977 using the floating cranes and 720,000 tons in 1978 after a part of equipment became operational. Similarly, on the Smelters' wharf in Swinioujscie, 410,000 tons were loaded and unloaded in 1978 using the floating cranes. Starting of loading and unloading operations at these two wharfs, having the depth of 12 meters, permitted servicing by the port authority of large ships of 70,000 tons deadweight capacity.

As the rate of investment at the specialized coal facility in Swinioujscie (Swi-IV) was slowed down, the start up of the radiation defreezing plant for coal carrying railroad cars was speeded up in 1978 and its defreezing capability was used in operating the Swi-II coal facility.

Without any investments, simply by organizational shifts of assignment of locations to individual regular lines, a temporary container facility was organized on the Czechoslovak wharf that handled 160,000 tons of containerized general cargo in 1978.

In the field of port transportation service, the transportation of grain and ore was made more efficient by introducing shuttle trains; that of cement and grain by carrying coal to the port in bags and grain away from the port in the same eight wheel, high capacity box cars; and transportation of coal and cement by carrying coal to the port and ore to the Silesian foundries in open cars. When the traffic in grain increased and caused transportation difficulties, loading of cars was speeded up by improving labor technology and by applying the method of conical loading trays.

The concentrated potential of enterprises grouped in the port area, opened up the possibility of coordination and an organizational solution to the problem of unloading large ships in Swinioujscie using lighters and transporting the cargo to the Police* Chemical Works, the Phosphate Factory in Szczecin and other industrial plants near the port.

Using the Zegluga Szczecinska (Szczecin Navigation) barge fleet, a barge relay was organized on the Swinioujscie-Szczecin route that carried in 1978, 993.4 thousand tons, i.e. 372,000 tons more than in the previous year. The division of cargo transportation area between the Zegluga na Odrze (the Odza Navigation) and the Zegluga Szczecinska implemented on 1 January 1978, resulted in the specialization of the Zegluga Szczecinska in the port traffic within the framework of the port system. This specialization opened up the possibility of further development of the barge navigation in view of the continuing build up of the Swinioujscie port and the construction of a port in Police*.

The integration into the port system of ship support activities performed by the Maritime Services Enterprise and the Office of Expertise and

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*Translator's note: Police is a proper name, does not mean "police."

Quantitative Controls, favors the activation of additional port services and an expansion of the selection of services for the ships during their stay in port. The measure of the growth of support activities is the increase of the value of services provided by PUM Ship-Service from 133.3 million zlotys in 1976 to 146.5 million zlotys in 1978 and by Shipcontrol from 24.4 million zlotys in 1976 to 27 million zlotys in 1978.

The new economic organization permitted better exploitation of the port capacity and better use of the land, wharfs and buildings by providing reciprocal services. The Port Authority tugboats compensate to a great extent for the shortages of towing capacity in other enterprises. Setting up a centralized control point increased the usage of the Zegluga Szczecinska barges, shortened the storage time in barges and improved the fumigation cargo. Within the framework of inter-enterprise cooperation, a parcel of land and certain facilities on the Huk Wharf and along the Industrial Canal were made available to the Zegluga Szczecinska.

Barge Transport Data, Problems

Gdansk TECHNIKA I GOSPODARKA MORSKA in Polish No 10, Oct 79 pp 612-614

[Article by Teresa Polanska, Maritime Institute, Szczecin]

[Excerpts] Table 1. The Share of Individual Branches of Transportation in Servicing the Szczecin-Swinioujscie Port Authority in 1970-1978.

(1) Lata	(2) Obroty ogółem	(4) Transport kolejowy		(5) Żegluga śródlądowa		(6) Transport samochodowy	
	tys. ton (3)	tys. ton (3)	%	tys. ton (3)	%	tys. ton (3)	%
1970	15 742	13 303	84,5	2290	14,5	149	0,9
1971	16 660	14 277	85,7	2236	13,4	147	0,9
1972	17 187	14 484	84,3	2458	14,3	245	1,4
1973	18 750	16 129	86,0	2339	12,5	282	1,5
1974	21 454	18 548	86,5	2553	11,9	353	1,6
1975	20 863	17 695	84,9	2889	13,8	279	1,3
1976	22 544	18 807	83,4	3445	15,3	292	1,3
1977	22 637	19 205	84,9	3128	13,8	304	1,3
1978	23 357	19 983	85,6	3157	13,5	217	0,9

Źródło: Opracowanie własne na podstawie danych Zespołu Portowego Szczecin—Świnoujście.

Key:

1. Year
2. Total turnover
3. Thousands of tons
4. Railroad
5. Inland navigation
6. Truck

Source: Table developed by the author on the basis of the Szczecin-Swinioujscie Port Authority data.

Table 2. Transportation by Inland Waterways to and from the Szczecin-Swinioujscie Port Authority by Type of Cargo (in thousands of tons)*

(1) Grupy ładunków	1970	1971	1972	1973	1974	1975	1976	1977	1978
(2) OGÓŁEM	2290	2236	2458	2339	2553	2889	3445	3128	654
Węgiel (3)	914	761	640	686	418	379	772	647	1015
(4) Ruda	658	696	769	566	779	808	981	999	1309
Inne masowe (5)	599	709	973	958	1241	1547	1397	1347	65
(6) Zboże	27	51	48	80	74	62	70	73	10
Drewno (7)	—	—	—	3	4	7	1	12	74
(8) Drobnica	42	19	28	30	24	36	7	39	—
Płynne (9)	—	—	—	16	10	53	217	11	

Źródło: opracowanie własne na podstawie materiałów Zespołu Portowego Szczecin—Świnoujście.

* Z wyłączeniem przewozów pozaportowych, tj. do i z zakładów przemysłowych położonych w ujściu Odry poza granicami portu szczecińskiego.

Key:

1.	Type of cargo	4.	Ore	7.	Lumber
2.	Total	5.	Other bulk	8.	General cargo
3.	Coal	6.	Grain	9.	Liquids

Source: Table developed by the author on the basis of material provided by the Szczecin-Swinioujscie Port Authority

*Excluding transportation outside the port area, i.e. to and from industrial plants located on the Mouth of the Odra outside of the port area.

Table 3. Share of Inland Navigation Companies in the Transportation to and from the Szczecin-Swinioujscie Port Authority in the Years 1970-1978

(1) Armatorzy	1970		1971		1972		1973		1974		1975		1976		1977		1978	
	tys. ton (2)	%	tys. ton (2)	%	tys. ton (2)	%	tys. ton (2)	%	tys. ton (2)	%	tys. ton (2)	%	tys. ton (2)	%	tys. ton (2)	%	tys. ton (2)	%
OGÓŁEM (3)	2290	100,0	2236	100,0	2458	100,0	2339	100,0	2553	100,0	2889	100,0	3445	100,0	3128	100,0	3157	100,0
(4) Żegluga na Odrze	1904	83,1	1782	79,7	1843	75,0	1477	63,1	1248	48,9	1194	41,3	1271	36,9	1328	42,5	1731	54,8
Żegluga (5) Szczecińska	321	14,0	389	17,4	520	21,1	698	29,8	1096	42,9	1473	51,0	1677	48,7	1552	49,6	1311	41,6
(6) Żegluga Bydgoska	23	1,0	22	1,0	63	2,6	51	2,2	145	5,7	115	4,0	231	6,7	180	5,7	96	3,1
Żegluga CSRS (7)	16	0,7	18	0,8	4	0,2	1	0,0	—	—	—	—	—	—	9	0,3	4	0,1
(8) Żegluga NRD	26	1,2	25	1,1	28	1,1	26	1,1	46	1,8	53	1,8	17	0,5	41	1,3	11	0,3
Żegluga Berlina (9) Zachodniego	—	—	—	—	—	—	86	3,7	17	0,7	54	1,9	249	7,2	18	0,6	4	0,1

Źródło: opracowanie własne na podstawie danych Zespołu Portowego Szczecin—Świnoujście.

Key:

1.	Inland navigation company	5.	The Szczecin Navigation	8.	The German Democratic Republic Navigation
2.	Thousands of tons	6.	The Bydgoszcz Navigation	9.	The West Berlin Navigation
3.	Total	7.	The Czechoslovak Socialist Republic Navigation		
4.	The Navigation of the Odra				

Source: Table developed by the author on the basis of the Szczecin-Swinioujscie Port Authority data.

The basic conditions for using inland navigation in conjunction with the riverine/maritime ports of the Mouth of the Odra are similar to those in other branches of the transportation industry: the technical conditions, i.e. the road, the conveyance fleet and the ports; and the external conditions, i.e. the organization and coordination arrangements, the legal and commercial framework; and the general conditions. All these elements are closely related and only their concerted development can help activate the transportation by inland waterways.

The current system of domestic waterways is favorable inasmuch as the two main rivers, the Vistula and the Odra (connected by the Bydgoszcz Canal, the Notec and the Warta), are flowing to two largest Baltic ports: Gdansk and Szczecin. Additionally, these two rivers are connected via the Spree and the Havel with the West European inland waterway system and that creates a favorable inland waterway system. The only, but the most important, shortcoming of this system is a non-uniform transport capability caused by varying transit depth. Additionally, as there is no connection between the Polish inland waterway system and that of Southern Europe, the operational area of the Polish inland navigation system is limited. Implementing the plan, existing for many years, to build the Odra-Danube canal would have great impact on the riverine-maritime ports at the Mouth of the Odra. The flow of cargo from the North or from the South of Europe would pass to a great extent through the above mentioned canal, the Odra river and then through the Szczecin-Swinioujscie Port Authority.

The fleet should be maximally adapted to the waterway and to the type of cargo transported. The matching of the fleet parameters with the waterway parameters and usage characteristics should consider primarily the possibility of year-round operations under varying weather conditions. This aspect is of special importance for the Mouth of the Odra ports and in particular for the Szczecin-Swinioujscie channel which connects these two ports. These difficulties would be undoubtedly solved by introducing suitable fleet on this route; the proposed liberalization of rules limiting the navigation on this route, primarily in the area of the Szczecin Bay, to 4 degrees on the Beaufort scale for the safety of the navigation, seems to be unrealistic. The possibility of barge traffic during the night is not used to a sufficient degree and consequently the tugboats working on the 24 hour schedule are forced to wait unproductively.

The third basic technical condition is the state of the ports and transfer points used by inland navigation, that is both the inland and the maritime ports used by the inland fleet. The basic thing is to equip these ports with highly efficient loading and unloading devices adapted to the specific cargo and technology of transportation, e.g. barge tippers, conveyor belts, bucket loaders etc. In the Mouth of the Odra there are several small inland ports and landings whose condition in most cases does not permit their use. Modernization of these ports would certainly contribute both to the economic stimulation of the areas around them and to increasing the demand for inland water transportation.

In parallel with the basic technical conditions of the waterways, the fleet and the ports, the activation of inland water transportation is influenced by other factors which can be generally classified as macroeconomic conditions, i.e. those which should be considered in the broad context of riverine/maritime ports of the Mouth of the Odra. Undoubtedly, the spatial conditions are one of the most important in this category.

In the Szczecin-Swinioujscie Port Authority area, the spatial conditions are of special importance for inland navigation because of the special geographical features of this area (the distance between the port of Szczecin and the port of Swinioujscie and navigation conditions in the Bay of Szczecin) and because of the heterogeneity of the fleet used.

The shortage of properly organized control and dispatching points for the inland fleet located near the loading and unloading wharfs causes a significant hindrance in controlling the inland fleet operating in the area of the Szczecin-Swinioujscie Port Authority. Also, to date, there is no integrated base to satisfy the overall needs of inland navigation in the area of maintenance, winter shelter for barges, central dispatcher's office, social base etc. The lack of control and dispatching points creates an especially acute problem in Swinioujscie where there is not one control and dispatching point organized to satisfy its particular needs. Many studies, including one by the Maritime Institute Department in Szczecin[2], presented the need and the methods to solve the problem. Appropriate decisions and investment resources devoted to this purpose should solve this progressively more pressing problem in the near future.

Also, the coordinating and organizational conditions have a decisive impact on rational utilization of the fleet. The need for common dispatching system of the inland fleet in the vast water areas of the riverine-maritime ports of the Mouth of the Odra has become essential. The position of inland navigation as one of the hinterland transportation branches participating in serving the Szczecin-Swinioujscie Port Authority has been defined by the legal and commercial framework. The status of riverine vessels in the port was established by the Rules of Inland Navigation Service in the Szczecin-Swinioujscie Port Authority Area published in 1976 but it will be necessary to wait a while for the effects of these rules to be felt. Their impact will depend to a great extent on the goodwill of parties who signed the rules. Some assurance of compliance with the rules would be provided by a consistently applied system of agreed upon rewards and penalties for using the barges in accordance with or contrary to the agreed standards.

All other factors having significant impact on the position of inland navigation in the Polish transportation system can be included under the rubric of general conditions. The essential factor in this category is the so called unreliability of inland navigation as a carrier which is the result of the lack of assured regularity that is caused by insufficient adaptation of the main waterways in Poland to the needs of inland navigation.

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[2] T. Polanska: The Study of Location of Inland Navigation Bases in the Area of the Szczecin-Swinioujscie Port Authority with Special Consideration Given to PP Odra Navigation, Maritime Institute, Gdansk-Szczecin 1977.

Of utmost importance for the increased role of inland navigation in serving the ports of the Mouth of the Odra are the matters conventionally known as the navigation policy of the inland ship owners. The primary problem is the proper understanding of the importance of long distance transportation by inland waterways for the improvement of service received by the Szczecin-Swinioujscie Port Authority.

However, as long as the Odra waterway is not modernized, the long distance transportation will be technologically difficult and to some extent haphazard. Additionally, for the shipping companies, the long distance transportation is much less profitable than other types of transportation such as carrying coal or aggregate over short distances around Wroclaw in Silesia. In view of the fact that both types of transportation are necessary, both must be implemented in accordance with the current requirements of the national economy. For this reason, to avoid the phenomenon--undesirable from the national point of view--of decreased transportation of the cargo destined for foreign trade over the Odra route, the control of the short distance local transportation and of the long distance transportation should be separated in the future. The introduction of an appropriate preferential tariff for long distance transportation would induce the inland shipping companies to activate this transportation which, in turn, would favorably impact the increase of inland navigation's share in serving the ports in the Mouth of the Odra.

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